PROGRAM
FOR
THE ANNUAL
MEETING
OF THE
New England Surgical Society

WITH
TRANSACTIONS
VOLUME XCVII
FOR THE YEAR 2016

Seaport Hotel
Boston, Massachusetts
September 16-18
PROGRAM
FOR
THE ANNUAL MEETING
OF THE

New England Surgical Society

The Final Scientific Program, which begins on page 86, includes the abstracts of all accepted papers, brief reports, and posters.

New England Surgical Society
Administrative Offices
500 Cummings Center, Suite 4550
Beverly, MA 01915

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Email: admin@NESurgical.org
Website: www.NESurgical.org
MICHAEL J. ZINNER, MD
Coral Gables, Florida
President, 2016
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* These sections available on-site in Boston, Massachusetts, or by logging into the Members Only Area of the NESS Website at nesurgical.org/MembersOnly.cgi.
OFFICERS
NEW ENGLAND SURGICAL SOCIETY
2015–2016

President
Michael J. Zinner, MD, Coral Gables, Florida

President-Elect
Bruce J. Leavitt, MD, Burlington, Vermont

Vice President
Richard J. Barth, Jr., MD, Lebanon, New Hampshire

Secretary
David E. Clark, MD, Portland, Maine

Treasurer
John E. Sutton, Jr., MD, Redding, Connecticut

Recorder
Walter E. Longo, MD, New Haven, Connecticut

Past President
David L. Berger, MD, Boston, Massachusetts

REPRESENTATIVES (with Dates of Retirement)
Anne C. Larkin, MD (Massachusetts) 2016
Philip T. Peverada, MD (Maine) 2017
Peter J. Mazzaglia, MD (Rhode Island) 2018
Kurt K. Rhynhart, MD (New Hampshire) 2019
Edward C. Borrazzo, MD (Vermont) 2020
Jeffrey L. Cohen, MD (Connecticut) 2021

Representative to the American Board of Surgery
James Whiting, MD (2018)

Representative to the American College of Surgeons,
Board of Governors
Frederick R. Radke, MD (2016)

Representative to the American College of Surgeons,
Advisory Council for General Surgery
David L. Berger, MD (2016)

OFFICE OF THE EXECUTIVE DIRECTOR

500 Cummings Center, Suite 4550
Beverly, Massachusetts 01915
Telephone: (978) 927-8330
Facsimile: (978) 524-0498
E-Mail: admin@nesurgical.org
Web Site: nesurgical.org
COMMITTEES
NEW ENGLAND SURGICAL SOCIETY

NOMINATING COMMITTEE
Neil S. Yeston, MD., Chair (2016)
Frederick R. Radke, MD (2017)
David L. Berger, MD (2018)

PROGRAM COMMITTEE
Richard S. Swanson, MD, Chair (2016)
Dougald C. MacGillivray, MD (2017)
Orlando C. Kirton, MD (2018)
Kari Rosenkranz, MD (2019)
Matthew A. Conway, MD (2020)
Michael P. Vezeridis, MD (2021)
Michael J. Zinner, MD, President (2016)
Bruce J. Leavitt, MD, President-Elect (2016)
David E. Clark, MD, Secretary (2016)
Richard J. Barth, Jr., MD, Vice President (2016)
Walter E. Longo, MD, Recorder (2016)
Anne C. Larkin, MD, Chair, Research Day (2016)

PUBLICATIONS COMMITTEE
Walter E. Longo, MD, Chair (2016)
Stanley W. Ashley, MD (2016)
Richard J. Barth, Jr., MD (2016)
Kenneth W. Burchard, MD (2016)
Blake Cady, MD (2016)
William G. Cioffi, MD (2016)
David E. Clark, MD (2016)
Andrew J. Duffy, MD (2016)
Geoffrey M. Graeber, MD (2016)
Orlando C. Kirton, MD (2016)
David P. Mooney, MD (2016)
Rocco Orlando, III, MD (2016)
Rocco Ricciardi, MD (2016)
Barbara L. Smith, MD (2016)
Thomas F. Tracy, Jr., MD (2016)
Andrew L. Warshaw, MD (2016)
John P. Welch, MD (2016)
James Whiting, MD (2016)
CENTENNIAL CELEBRATION STEERING COMMITTEE
Thomas A. Colacchio, MD, Chair (2016)

- Edward C. Borrazzo, MD (2016)
- David W. Butsch, MD (2016)
- Blake Cady, MD (2016)
- David E. Clark, MD (2016)
- H. David Crombie, MD (2016)
- Patricia K. Donahoe, MD (2016)
- Walter B. Goldfarb, MD (2016)
- Graeme L. Hammond, MD (2016)
- James C. Hebert, MD (2016)
- Horace F. Henriques, III, MD (2016)
- Robert W. Hopkins, MD (2016)
- Anne C. Larkin, MD (2016)
- Bruce J. Leavitt, MD (2016)
- Walter E. Longo, MD (2016)
- Peter J. Mazzaglia, MD (2016)
- James O. Menzoian, MD (2016)
- Francis D. Moore, Jr., MD (2016)
- Rocco Orlando, III, MD (2016)
- Philip T. Peverada, MD (2016)
- Frederick R. Radke, MD (2016)
- Kurt K. Rhynhart, MD (2016)
- John E. Sutton, Jr., MD (2016)
- Richard S. Swanson, MD (2016)
- Thomas F. Tracy, Jr., MD (2016)
- Michael P. Vezeridis, MD (2016)
- John P. Welch, MD (2016)
- Neil S. Yeston, MD (2016)

GRADUATE MEDICAL EDUCATION & CANDIDATE MEMBERSHIP COMMITTEE
Anne C. Larkin, MD, Chair (2016)

- James C. Hebert, MD (2016)
- Walter E. Longo, MD (2016)
- Peter J. Mazzaglia, MD (2016)
- Kurt K. Rhynhart, MD (2016)
- John E. Sutton, Jr., MD (2016)
- Richard S. Swanson, MD (2016)
- Thomas F. Tracy, Jr., MD (2016)
- Michael P. Vezeridis, MD (2016)
- John P. Welch, MD (2016)
- Neil S. Yeston, MD (2016)

NEW MEMBERS COMMITTEE
Allan M. Goldstein, MD, Chair (2016)
SCHOLARS FOUNDATION BOARD OF DIRECTORS
John P. Welch, MD, President (2016)
Charles H. Salem, MD, Secretary & Treasurer (2016), Vermont Director (2018)
Elizabeth W. Brady, MD, Connecticut Director (2020)
Horace F. Henriques, III, MD, New Hampshire Director (2017)
Arlet G. Kurkchubasche, MD, Rhode Island Director (2019)
G. Thomas Marshall, MD, Maine Director (2016)
David McAneny, MD, Massachusetts Director (2021)
Michael J. Zinner, MD, NESS President (2016)

FUTURE MEETINGS
2017 Annual Meeting, September 8–10, 2017
Omni Mount Washington Hotel, Bretton Woods, New Hampshire

2018 Annual Meeting, September 21–23, 2018
Westin Portland Harborview, Portland, Maine
LEARNING OBJECTIVES

This activity is designed for physicians. Upon completion of this course, participants will be able to:

1. Describe overcoming barriers to survival after Pig-to-Baboon Liver Transplantation
2. Describe the benefits of a surgical rotation in an international setting
3. Discuss the variation of narcotic prescriptions written after general surgery procedures
4. Manage standardizing venous thromboembolism prophylaxis in thyroid and parathyroid patients
5. Implement opportunities for global health
6. Discuss advances in breast cancer surgery
7. Describe the morbidity of sleeve gastrectomies for obesity
8. Discuss how surgical volume affects credentialing for procedures
9. Describe improvements in trauma surgery care
10. Describe improvements in pediatric surgical care
CONTINUING MEDICAL EDUCATION
CREDIT INFORMATION

Accreditation

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American College of Surgeons and the New England Surgical Society. The American College of Surgeons is accredited by the ACCME to provide continuing medical education for physicians.

AMA PRA Category 1 Credits™

The American College of Surgeons designates this live activity for a maximum of 10.50 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Of the AMA PRA Category 1 Credits™ listed above, a maximum of 6.25 credits meet the requirements for Self-Assessment.

DISCLOSURE INFORMATION

In compliance with ACCME Accreditation Criteria, the American College of Surgeons, as the accredited provider of this activity, must ensure that anyone in a position to control the content of the educational activity has disclosed all relevant financial relationships with any commercial interest. All reported conflicts are managed by a designated official to ensure a bias-free presentation. Please see the insert to this program for the complete disclosure list.

AMERICANS WITH DISABILITIES ACT

If you require special accommodations to attend or participate in the CME activity, please provide information about your requirements to the New England Surgical Society, 500 Cummings Center, Suite 4550, Beverly, MA 01915; phone: (978) 927-8330; fax: (978) 524-0498; e-mail: meetings@nesurgical.org.
GENERAL INFORMATION/ACKNOWLEDGMENTS

Registration Desk

The Registration Desk is located in Plaza Ballroom Foyer during the following hours:

Friday, September 16, 9:00 am–5:00 pm
Saturday, September 17, 7:00 am–12:00 pm
Sunday, September 18, 7:00 am–11:00 am

Speaker Ready Room

Faculty and Authors are requested to present their PowerPoint presentation to the technician in the Speaker Ready Room, located in the Plaza Ballroom Foyer, upon arrival to the meeting, or at least 12 hours prior to the opening of the session in which you are scheduled to present. Single LCD projection (PowerPoint) from a single, dedicated PC or laptop will be provided. Individual laptop computers may not be used. The Speaker Ready Room is open during the following hours:

Friday, September 16, 9:00 am–5:00 pm
Saturday, September 17, 7:00 am–12:00 pm
Sunday, September 18, 7:00 am–10:30 am

Member Business Meeting (Members Only)

On Sunday, September 18th, the Annual Business Meeting will be held from 7:30–8:15 am in Plaza Ballroom AB.

Welcome Reception

On Friday evening, September 16th, there will be a Welcome Reception held in the Lighthouse Ballroom. Exhibitors are encouraged to attend this event. Badges will be required to attend the event.

Centennial Video Premiere

Saturday, September 17, 6:15 pm–7:00 pm

On Saturday, September 17th, prior to the President’s Reception, the NESS will continue celebrating its Centennial with a video on the history of the Society. The premiere begins with a Red Carpet walk at 6:15 pm, followed by the 30-minute documentary promptly at 6:30 pm. Smile for the paparazzi, grab some popcorn, and sip a glass of sparkling wine while enjoying this premiere, which will take place in the Amphitheater of the World Trade Center. Dress is black tie preferred, as this event leads directly into the President’s Reception & Dinner. To attend the premiere, all registered physicians and spouses are required to either wear badges or, if the President’s Reception & Dinner was purchased separately, present tickets.
President’s Reception & Dinner

On Saturday, September 17th, the Society will hold its Annual President’s Reception & Dinner. Dress is black tie preferred, and the reception and dinner will take place in the Harborview Ballroom of the World Trade Center.

All registered physicians and spouses are required to wear badges to attend the event or present tickets if the event was purchased separately. Exhibitors may purchase additional tickets over and above their allotted two tickets. Additional tickets are available at the NESS Registration Desk.

Acknowledgments

Educational Grants

The New England Surgical Society wishes to recognize and thank the following company for its ongoing support through educational grants:

ETHICON

Marketing & Exhibitor Support

The New England Surgical Society wishes to recognize and thank the following companies for their marketing support:

Bard Davol
ETHICON
Genomic Health, Inc.
Gore & Associates
Integra Lifesciences
Mallinckrodt Pharmaceuticals
Medtronic
The Medicines Company

The Exhibitor Program represents a valuable part of this meeting, and the Society urges registrants to visit the exhibits during regularly scheduled breaks.

Continental breakfast will be available on Saturday and Sunday, with continuous beverage service available during the scheduled Exhibit hours. Exhibits are located in Plaza Ballroom C, and are open during the following hours:

Friday, September 16, 12:00 pm–3:00 pm
Saturday, September 17, 7:00 am–10:35 am
Sunday, September 18, 7:00 am–10:00 am
PAST AND PRESENT OFFICERS OF THE
NEW ENGLAND SURGICAL SOCIETY

PRESIDENTS

1916 Samuel J. Mixter, MD, Boston, Massachusetts
1917-19 John B. Wheeler, MD, Burlington, Vermont
1920 Homer Gage, MD, Worcester, Massachusetts
1921 John M. Gile, MD, Hanover, New Hampshire
1922 Charles A. Porter, MD, Boston, Massachusetts
1923 John F. Thompson, MD, Portland, Maine
1924 Fred B. Lund, MD, Boston, Massachusetts
1925 John W. Keefe, MD, Providence, Rhode Island
1926 William H. Bradford, MD, Portland, Maine
1927 Daniel F. Jones, MD, Boston, Massachusetts
1928 Robert B. Osgood, MD, Boston, Massachusetts
1929 Philemon E. Truesdale, MD, Fall River, Massachusetts
1930 David Cheever, MD, Boston, Massachusetts
1931 Alfred M. Rowley, MD, Hartford, Connecticut
1932 Frank H. Lahey, MD, Boston, Massachusetts
1933 Lyman Allen, MD, Burlington, Vermont
1934 Frederick B. Sweet, MD, Springfield, Massachusetts
1935 Peer P. Johnson, MD, Beverly, Massachusetts
1936 Daniel C. Patterson, MD, Bridgeport, Connecticut
1937 Lucius C. Kingman, MD, Providence, Rhode Island
1938 John M. Birnie, MD, Springfield, Massachusetts
1939 John Homans, MD, Boston, Massachusetts
1940 Carl M. Robinson, MD, Portland, Maine
1941 James B. Woodman, MD, Franklin, New Hampshire
1942-44 Walter G. Phippen, MD, Salem, Massachusetts
1945-46 James R. Miller, MD, West Hartford, Connecticut
1947 Thomas H. Lanman, MD, Boston, Massachusetts
1948 David W. Parker, MD, Manchester, New Hampshire
1949 Emery M. Porter, MD, Providence, Rhode Island
1950 Edward H. Risley, MD, Waterville, Maine
1951 W. Jason Mixter, MD, Boston, Massachusetts
1952 Charles P. Chandler, MD, Montpelier, Vermont
1953 John P. Bowler, MD, Hanover, New Hampshire
1954 Ashley W. Oughterson, MD, New Haven, Connecticut
1955 Irving J. Walker, MD, Boston, Massachusetts
1956 George W. Waterman, MD, Providence, Rhode Island
1957 Donald Munro, MD, Boston, Massachusetts
1958 Samuel R. Webber, MD, Calais, Maine
1959 Samuel F. Marshall, MD, Boston, Massachusetts
1960 Welles A. Standish, MD, Harford, Connecticut
1961 Grantley W. Taylor, MD, Weston, Massachusetts
1962 M. Dawson Tyson, MD, Hanover, New Hampshire
1963 Leland S. McKittrick, MD, Boston, Massachusetts
1964 Albert G. Mackay, MD, Burlington, Vermont
1965 Francis A. Sutherland, MD, Torrington, Connecticut
1966 George R. Dunlop, MD, Worcester, Massachusetts
1967 Marshall K. Bartlett, MD, Boston, Massachusetts
1968 Mark Hayes, MD, New Haven, Connecticut
1969 Richard Warren, MD, Cambridge, Massachusetts
1970 Clinton R. Mullins, MD, Concord, New Hampshire
1971 Bentley P. Colcock, MD, Boston, Massachusetts
1972 William W. Babson, MD, Gloucester, Massachusetts
1973 J. Gordon Scannell, MD, Boston, Massachusetts
1974 Thomas Perry, Jr., MD, Providence, Rhode Island
1975 John J. Byrne, MD, Boston, Massachusetts
1976 Emerson H. Drake, MD, Portland, Maine
1977 Gordon A. Donaldson, MD, Boston, Massachusetts
1978 Frederick P. Ross, MD, Fitchburg, Massachusetts
1979 John R. Brooks, MD, Boston, Massachusetts
1980 John F. Reed, MD, Hartford, Connecticut
1981 Earle W. Wilkins, Jr., MD, Boston, Massachusetts
1982 Walter B. Crandell, MD, Hanover, New Hampshire
1983 Fiorindo A. Simeone, MD, Providence, Rhode Island
1984 William W.L. Glenn, MD, New Haven, Connecticut
1985 John W. Braasch, MD, Burlington, Massachusetts
1986 William V. McDermott, MD, Boston, Massachusetts
1987 Joseph E. Murray, MD, Wellesley Hills, Massachusetts
1988 Clement A. Hiebert, MD, Portland, Maine
1989 James H. Foster, MD, Farmington, Connecticut
1990 John F. Burke, MD, Boston, Massachusetts
1991 H. Brownell Wheeler, MD, Worcester, Massachusetts
1992 John H. Davis, MD, Burlington, Vermont
1993 W. Hardy Hendren, MD, Boston, Massachusetts
1994 Andrew L. Warshaw, MD, Boston, Massachusetts
1995 Robert W. Crichlow, MD, Lebanon, New Hampshire
1996 Blake Cady, MD, Boston, Massachusetts
1997 Paul Friedmann, MD, Springfield, Massachusetts
1998 Leslie W. Ottinger, MD, Boston, Massachusetts
1999 Peter J. Deckers, MD, Farmington, Connecticut
2000 Ashby C. Moncure, MD, Boston, Massachusetts
2001 H. David Crombie, MD, Hartford, Connecticut
2002 Roger S. Foster, Jr., MD, Shelburne, Vermont
2003 Albert W. Dibbins, MD, Portland, Maine
2004 Walter B. Goldfarb, MD, Portland, Maine
2005 A. Benedict Cosimi, MD, Boston, Massachusetts
2006 Robert M. Quinlan, MD, Worcester, Massachusetts
2007 John P. Welch, MD, Hartford, Connecticut
2008 Thomas A. Colacchio, MD, Lebanon, New Hampshire
2009 Francis D. Moore, Jr., MD, Boston, Massachusetts
2010 Patricia K. Donahoe, MD, Boston, Massachusetts
2011 James C. Hebert, MD, Burlington, Vermont
2012 Thomas F. Tracy, Jr., MD, Providence, Rhode Island
2013 Neil S. Yeston, MD, Hartford, Connecticut
2014 Frederick R. Radke, MD, Portland, Maine
2015 David L. Berger, MD, Boston, Massachusetts
2016 Michael J. Zinner, MD, Coral Gables, Florida
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<th>Year</th>
<th>Name</th>
<th>City</th>
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<tr>
<td>1917</td>
<td>John B. Wheeler, MD</td>
<td>Burlington, Vermont</td>
<td>Vermont</td>
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<td>1918-20</td>
<td>Homer Gage, MD</td>
<td>Worcester, Massachusetts</td>
<td>Massachusetts</td>
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<td>1921</td>
<td>William L. Cousins, MD</td>
<td>Portland, Maine</td>
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<td>1922</td>
<td>Seldom B. Overlock, MD</td>
<td>Pomfret, Connecticut</td>
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<td>1923</td>
<td>Herbert L. Smith, MD</td>
<td>Nashua, New Hampshire</td>
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<td>Lyman Allen, MD</td>
<td>Burlington, Vermont</td>
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<td>Frederick B. Sweet, MD</td>
<td>Springfield, Massachusetts</td>
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<td>Alfred M. Rowley, MD</td>
<td>Hartford, Connecticut</td>
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<td>Ralph H. Seelye, MD</td>
<td>Springfield, Massachusetts</td>
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<td>William W. Townsend, MD</td>
<td>Burlington, Vermont</td>
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<td>1929</td>
<td>George C. Wilkins, MD</td>
<td>Manchester, New Hampshire</td>
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<td>1930</td>
<td>Willis E. Hartshorn, MD</td>
<td>New Haven, Connecticut</td>
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<td>1931</td>
<td>Arthur T. Jones, MD</td>
<td>Providence, Rhode Island</td>
<td>Rhode Island</td>
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<td>1932</td>
<td>Thomas W. Luce, MD</td>
<td>Portsmouth, New Hampshire</td>
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<td>1933</td>
<td>Carl M. Robinson, MD</td>
<td>Portland, Maine</td>
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<td>H. Gildersleeve Jarvis, MD</td>
<td>Hartford, Connecticut</td>
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<td>1935</td>
<td>Channing Simmons, MD</td>
<td>Boston, Massachusetts</td>
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<td>William H. Townsend, MD</td>
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<td>David W. Parker, MD</td>
<td>Manchester, New Hampshire</td>
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<td>Walter G. Phippen, MD</td>
<td>Salem, Massachusetts</td>
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<td>Carl M. Robinson, MD</td>
<td>Portland, Maine</td>
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<td>James B. Woodman, MD</td>
<td>Franklin, New Hampshire</td>
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<td>1941</td>
<td>George M. Sabin, MD</td>
<td>Burlington, Vermont</td>
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<td>1942</td>
<td>Ernest L. Herk, MD</td>
<td>Worcester, Massachusetts</td>
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<td>1943-44</td>
<td>Benjamin H. Alton, MD</td>
<td>Worcester, Massachusetts</td>
<td>Massachusetts</td>
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<td>1945-46</td>
<td>John H. Woodruff, MD</td>
<td>Barre, Vermont</td>
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<td>1947</td>
<td>John P. Bowler, MD</td>
<td>Hanover, New Hampshire</td>
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<td>Edward R. Lampson, MD</td>
<td>Hartford, Connecticut</td>
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<td>1949</td>
<td>Herbert A. Durfee, MD</td>
<td>Burlington, Vermont</td>
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<td>1950</td>
<td>George M. Smith, MD</td>
<td>New Haven, Connecticut</td>
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<td>1951</td>
<td>James W. Jameson, MD</td>
<td>Concord, New Hampshire</td>
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<td>1952</td>
<td>Peirce Leavitt, MD</td>
<td>Brockton, Massachusetts</td>
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<td>1953</td>
<td>Ernest M. Daland, MD</td>
<td>Boston, Massachusetts</td>
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<td>1954</td>
<td>Stephen A. Cobb, MD</td>
<td>Sanford, Maine</td>
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<td>Frederick S. Hopkins, MD</td>
<td>Springfield, Massachusetts</td>
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<td>Thacher W. Worthen, MD</td>
<td>Hartford, Connecticut</td>
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<td>Charles C. Lund, MD</td>
<td>Boston, Massachusetts</td>
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<td>1958</td>
<td>William J. German, MD</td>
<td>New Haven, Connecticut</td>
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<td>1959</td>
<td>John W. Spellman, MD</td>
<td>Brookline, Massachusetts</td>
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<td>1960</td>
<td>J. Murray Beardsley, MD</td>
<td>Providence, Rhode Island</td>
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<td>1961</td>
<td>W. Fenn Hoyt, MD</td>
<td>Springfield, Massachusetts</td>
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<td>1962</td>
<td>Philip H. Wheeler, MD</td>
<td>Brattleboro, Vermont</td>
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<td>1963</td>
<td>Clinton R. Mullins, MD</td>
<td>Concord, New Hampshire</td>
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<td>1964</td>
<td>Francis A. Sutherland, MD</td>
<td>Torrington, Connecticut</td>
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<td>1965</td>
<td>Robert R. Baldridge, MD</td>
<td>Providence, Rhode Island</td>
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<td>1966</td>
<td>John W. Strieder, MD</td>
<td>Newton, Massachusetts</td>
<td>Massachusetts</td>
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<td>1967</td>
<td>Thomas Perry, Jr., MD</td>
<td>Providence, Rhode Island</td>
<td>Rhode Island</td>
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<td>1968</td>
<td>N. William Wawro, MD</td>
<td>Hartford, Connecticut</td>
<td>Connecticut</td>
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<td>1969</td>
<td>Howard Ulfelder, MD</td>
<td>Boston, Massachusetts</td>
<td>Massachusetts</td>
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<td>Michael R. Curci, MD</td>
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<td>Giles F. Whalen, MD</td>
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<td>Theresa A. Graves, MD</td>
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<td>Michael P. Vezeridis, MD</td>
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### SECRETARIES

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<td>Neil Hyman, MD</td>
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### TREASURERS

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## Past Meetings of The New England Surgical Society

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1975 Wentworth-by-the-Sea, Portsmouth, New Hampshire
1976 The Mountain View House, Whitefield, New Hampshire
1977 Wentworth-by-the-Sea, Portsmouth, New Hampshire
1978 The Balsams Grand Resort, Dixville Notch, New Hampshire
1979 The Mountain View House, Whitefield, New Hampshire
1980 Wentworth-by-the-Sea, Portsmouth, New Hampshire
1981 The Balsams Grand Resort, Dixville Notch, New Hampshire
1982 Mount Washington Hotel, Bretton Woods, New Hampshire
1983 Mount Washington Hotel, Bretton Woods, New Hampshire
1984 The Balsams Grand Resort, Dixville Notch, New Hampshire
1985 The Balsams Grand Resort, Dixville Notch, New Hampshire
1986 The Balsams Grand Resort, Dixville Notch, New Hampshire
1987 Mount Washington Hotel, Bretton Woods, New Hampshire
1988 The Bonaventure Hilton Hotel, Montreal, Quebec, Canada
1989 Mount Washington Hotel, Bretton Woods, New Hampshire
1990 Newport Marriott Hotel, Newport, Rhode Island
1991 Le Chateau Frontenac, Quebec City, Quebec, Canada
1992 The Balsams Grand Resort, Dixville Notch, New Hampshire
1993 The Charles Hotel, Cambridge, Massachusetts
1994 Newport Marriott Hotel, Newport, Rhode Island
1995 Westin Mont-Royal Hotel, Montreal, Quebec, Canada
1996 The Balsams Grand Resort, Dixville Notch, New Hampshire
1997 The Sagamore Resort, Lake George at Bolton Landing, New York
1998 The Four Seasons Hotel, Toronto, Ontario, Canada
1999 The Doubletree Islander, Newport, Rhode Island
2000 The Fairmont Copley Plaza Hotel, Boston, Massachusetts
2001 The Westin Hotel, Providence, Rhode Island
2002 The Balsams Grand Resort, Dixville Notch, New Hampshire
2003 The Hyatt Regency Newport, Newport, Rhode Island
2004 The Hilton Bonaventure, Montreal, Quebec, Canada
2006 Mystic Marriott, Groton, Connecticut
2007 Hilton Burlington, Burlington, Vermont
2008 Seaport Hotel and World Trade Center, Boston, Massachusetts
2009 Hyatt Regency Hotel & Spa, Newport, Rhode Island
2010 Omni Mount Washington Hotel, Bretton Woods, New Hampshire
2011 Marriott Hartford Downtown, Hartford, Connecticut
2012 Stowe Mountain Lodge, Stowe, Vermont
2013 Hyatt Regency, Newport, Rhode Island
NEW ENGLAND SURGICAL SOCIETY
CONSTITUTION AND BY-LAWS
ADOPTED 1961
(Amended through November 2015)

The Society is constituted for the purpose of promoting the science of surgery and kindred arts and sciences and the welfare of the profession of surgery in New England; to hold professional and social meetings and to publish transactions.

ARTICLE I

The name by which the society shall be known is the NEW ENGLAND SURGICAL SOCIETY.

ARTICLE II

MEMBERSHIP

Section a. There shall be six types of membership: active, senior, honorary, associate, candidate, and affiliate.

Section b. Active membership shall be limited to 425 members. No more than 35 new Active members shall be elected in any single year. Honorary membership shall be limited to 5 members. There shall be no limitation for senior, associate, candidate, or affiliate members.

Section c. Qualifications for active membership: Applicants for Active Membership shall be residents of the New England States. Fellowship in the American College of Surgeons or certification by an ABMS surgical specialty board and an unrestricted license (or an inactive license due to retirement) to practice medicine and surgery in the state in which the member practices or resides, are prerequisites for membership.

Section d. Qualifications for candidate membership: Applicants for Candidate Membership shall be matched or enrolled in a surgical residency or fellowship education program within the New England States. Individuals who have completed their education in one of the above programs and are in the process of acquiring either Fellowship in the American College of Surgeons or certification by an ABMS surgical specialty board are also eligible to apply for Candidate membership. Candidate members shall have no rights to vote or hold office. Candidate membership shall end either when the Candidate becomes eligible for Active or Affiliate membership, at which time s/he is invited to apply for Active or Affiliate membership, or five years after completion of education in one of the above programs, whichever comes first.
Section e. Qualifications for affiliate membership for surgeons from geographic areas outside the New England states: Applicants for Affiliate Membership shall reside outside of the New England States and within either the United States or Canada. Prerequisites for membership include: Fellowship in the American College of Surgeons, fellowship in the Royal College of Physicians and Surgeons of Canada, or certification by an ABMS surgical specialty board or Canadian equivalent; and an unrestricted license (or an inactive license due to retirement) to practice medicine and surgery in the state or province in which the member practices or resides. Affiliate members have the right to vote but may not hold office. Upon taking up residence in the New England States, an affiliate member shall ipso facto transfer to active membership, providing s/he meets all qualifications for active membership.

Section f. Nominations for membership in the Society may be submitted by any Active or Senior member. On request to the Secretary of the Society, an appropriate application form and a statement for prospective applicants shall be made available to any Active or Senior member of the Society who wishes to serve as the primary sponsor of an applicant. It shall be the responsibility of the primary sponsor to review with the applicant the statement adopted by the Executive Committee and to insure that the applicant understands the purpose of the Society and intends to support them. For active, senior, and affiliate membership applicants, it shall be the responsibility of the primary sponsor to complete the application form, and it shall be the responsibility of the co-sponsors to write letters of support, which shall be submitted with the application form to the Secretary of the Society prior to January 1st of the calendar year in which the application is to be considered. It shall be the responsibility of each state representative to review the active, senior, and affiliate application forms of applicants from his or her state, to seek advice from other members of the state about the proposed applicant, and to present the composite recommendations from members of that state for consideration by the Executive Committee at its first meeting after January 1st. For candidate membership applicants, completed applications can be submitted at any time.

Section g. Procedure for nomination: The Secretary will furnish each member of the Society with copies of the master list. Election of active, senior, and affiliate applicants whose names have been selected from the master list by the Executive Committee shall be by vote of all voting members of the entire Society. The Secretary will distribute voting ballots to all voting members with valid email addresses. Completed ballots must be returned to the Society by April 15th to be considered eligible. The Executive Committee shall review the ballots received by April 15th and elect those active, senior, and affiliate applicants selected by the membership ballot vote. Twenty negative votes shall exclude an applicant from membership. For candidate membership applicants, the Graduate Medical Education & Candidate Membership Committee shall vet applicants as needed throughout the year; if the candidate applicant is in good standing in his/her
program and approved by said committee, then s/he shall be elected to candidate membership.

Section h. An active, senior, or affiliate applicant’s name will remain on the master list and will automatically come up for consideration by the Executive Committee each year for a period of three years after which time if the applicant has not been selected for presentation for vote, his/her name will be deleted. The names of applicants deleted from the master list may be proposed a second time after an interval of one year. No applicant shall be proposed more than twice.

Section i. Honorary members shall be distinguished individuals in the field of surgery or the related sciences and shall be proposed and voted on by the Executive Committee. Honorary members shall not pay dues, nor shall they have the right to vote or hold office.

Section j. Senior membership will be automatic for all active, associate, and affiliate members the year following the year in which they reach the age of 65 prior to September 1st. Senior members shall be exempt from dues; furthermore, Senior members who reside within the New England States shall have all other rights and privileges of the Society including the right to vote and hold office.

Section k. Associate membership shall be accorded to active members upon change of residence to regions outside of the New England States. Associate members are exempt from dues and may not vote or hold office. Upon again taking up residence in the New England States, however, associate members shall ipso facto revert to active membership.

Section l. Any Active or Affiliate member who fails to actively participate in the Society for three years shall be automatically dropped from the membership. Active participation can be met by: 1) attendance at an annual meeting; 2) inclusion as an author of an abstract submitted for consideration for presentation at the annual meeting; 3) attendance at a Spring Resident research forum; 4) inclusion as an author of an abstract submitted for consideration for presentation at a Spring Resident research forum; or 5) participation in committees and/or performance of official business sanctioned by the Executive Committee.

Section m. Application blanks may be sent only to members for proposal of names for membership.

**ARTICLE III**

**OFFICERS**

Section a. The officers of the Society shall be a President, a President-Elect, a Vice-President, a Secretary, a Treasurer, and a Recorder. If a vacancy occurs in the Office of the President, the duties of the President shall be assumed by the President-Elect for the remainder of the vacated term. The President-Elect may ask the Nominating Committee to select both a President for the succeeding year
and a new President-Elect at the subsequent Annual Meeting of the Society. If the President becomes disabled, the duties of the President may be assumed by the President-Elect until the period of disability is over. If a vacancy occurs in the Office of President-Elect, the President may ask the Nominating Committee to select a new President-Elect and succeeding President-Elect at the next Annual Meeting of the Society.

If a vacancy or disability occurs in the Offices of Secretary, Recorder, or Treasurer the President may assume the responsibility of the Office until the Nominating Committee chooses a new Secretary, Recorder, or Treasurer at the next Annual Meeting of the Society. The President may ask the President-Elect to assume a portion of the responsibility by mutual agreement.

**Section b.** The officers of the Society shall hold office for one year or until their successors are elected or appointed.

**Section c.** The Executive Committee shall consist of the officers of the Society, the representative of the Society on the Board of Governors of the American College of Surgeons, the representative of the Society on the Advisory Council for Surgery of the American College of Surgeons, the designated representative of the Society on the American Board of Surgery, and six State Representatives, one from each of the New England States. The representative of the Society on the Board of Governors of the American College of Surgeons, and on the American Board of Surgery shall be nominated by the Executive Committee and approved by the Society. Membership on the Executive Committee shall be contingent upon the final acceptance of these nominees by the American College of Surgeons and the American Board of Surgery.

**Section d.** The Recorder shall act as the Necrologist of the Society. He shall obtain from the State representatives to the Executive Committee the names of all members who have died during the year and present them at the annual meeting. He shall be responsible for obtaining obituaries for inclusion in the *Transactions* of that year.

The Recorder shall have the proceedings of the annual business meeting and all discussions of papers presented at the scientific meeting properly recorded. He shall be responsible for having the *Transactions* published annually in such manner as the Society deems best.

**Section e.** Within a period of two months preceding the annual meeting, the President shall appoint an Auditing Committee of two, who shall audit the Treasurer’s account for the year and report to the Society at its annual meeting.
ARTICLE IV
ELECTION OF OFFICERS

The Officers shall be elected by ballot at the Annual Meeting. Within a period of two months preceding the Annual Meeting the President shall appoint a Nominating Committee which shall recommend to the Secretary a list of nominees to be placed before the Society for election at the Annual Meeting. The Nominating Committee shall be comprised of the three most immediate past Presidents currently residing in New England. The most senior of the three (in terms of service to the Society as President) shall serve as Chairman.

ARTICLE V
FEES AND DUES

The dues shall be determined annually by the Executive Committee. Any member who is in arrears in the payment of dues for two consecutive years shall, after due notice of the Treasurer, be dropped from the Society. The fiscal year of the Society shall end December 31.

ARTICLE VI
MEETINGS

The Society shall meet annually in the autumn. The time and place shall be determined by the Executive Committee. Application forms for new membership to the Society shall be distributed at the annual meeting. Special meetings may be held when ordered by the Executive Committee.

ARTICLE VII
PROGRAMS

The programs of all meetings shall be under control of the Executive Committee. All papers and discussions presented before the Society at its regular meetings shall become its property for publication in the Transactions and the official organ of the Society.
ARTICLE VIII
ARCHIVES
The archives of the Society will be assembled, maintained, and collated by the Archives Committee. The Chair of the Committee shall be appointed by the Executive Committee. Members of the Committee shall be chosen by the Chair. The Committee will prepare anniversary histories of the Society as appropriate.

ARTICLE IX
AMENDMENTS
The By-Laws may be repealed or amended and new By-Laws enacted by a two-thirds electronic vote of the membership within 30 days following the Annual Meeting of the Society when it has been proposed provided that the proposed alteration has been approved by the Executive Committee and electronically circulated to the Society at least 60 days preceding the vote.

ARTICLE X
DISTRIBUTION UPON DISSOLUTION
Upon the dissolution, termination, or cessation of the activities of the Society, any assets remaining in the name of the Society, after all obligations of the Society have been either paid or provided for, shall be distributed to an organization described in Section 501(c) (6) of the Internal Revenue Code of 1954, as amended, and the identity of such an organization shall be determined by a majority of the Executive Committee of the Society then in office. No amounts shall accrue to the benefit of the members or the officers of the Society.
INDOCTRINATION OF NEW MEMBERS
BY THE PRESIDENT

This charge is read by the President to the new members of the New England Surgical Society at the time of their induction. It is periodically reviewed and updated by the Executive Committee. The current statement was approved by the Executive Committee at its meeting on June 19, 1991.

As President of the New England Surgical Society, it is my pleasure to welcome you into active membership and to stress the obligations that you assume by such membership.

The New England Surgical Society was founded on February 5, 1916, by eighteen surgeons who were noted for their strength of character, as well as for their professional leadership. They limited the number of members in the Society solely to promote closer communication. Since its inception, the Society has provided a scientific forum and a meeting place for leaders in New England surgery, both from academic and community practice. The Society strives to increase knowledge of the art and science of surgery and to promote the welfare of surgical patients. It provides an environment where members may develop friendships with other New England surgeons who share their high professional standards. Membership is limited to surgeons who are not only leaders in their field, but who are also characterized by honesty, kindness, tolerance, equanimity, good manners and social consciousness. The Society expects its members to reflect these values in their practice and in their community. Members are also expected to support the Society through active participation in its meetings. It is in this spirit that we welcome each of you into our membership. We look forward to your own contributions to a proud tradition.

If you will exemplify the high ethical and professional standards of the New England Surgical Society in your practice of surgery, and if you will participate actively in the future meetings of this Society, please respond by saying, “I will.”

Since you have indicated your intent to become active and worthy members of the New England Surgical Society, and since you have been duly elected to membership therein, it is now my pleasure to present you each with a duly inscribed certificate of membership.

I now call upon the current members of the New England Surgical Society to rise and join me in welcoming our new colleagues.
REPORT OF THE SECRETARY

The ninety-sixth Meeting of the New England Surgical Society took place at the Hyatt Regency Newport, September 25-27, 2015. The meeting attracted 175 members, 20 guest physicians, and 63 residents, and was enhanced by the presence of 64 accompanying guests of the Society.

The academic program was thoughtfully prepared by the Program Committee under the direction of Dr. Thomas J. Miner. One hundred twelve abstracts had been submitted and 22 were selected for presentation in the traditional format, including four of the 2015 Research Presentation Day award winners. Eleven additional papers were presented as three-minute presentations with directed discussion, and the Paper of the Year Award was presented. There was also an outstanding panel discussion entitled, “An Honest Appraisal of Robotics.” Forty-three posters, including one award-winning presentation from the 2015 Research Day, were reviewed.

The Meeting’s Samuel Jason Mixter Lecturer was Dr. Dorry Segev, and Dr. David L. Berger gave his Presidential Address, entitled “Surgery: A Tradition Unlike Any Other.”

The Society’s Executive Committee continues to meet three times a year, in September at the Annual Meeting, in January via conference call, and in June in Waltham, Massachusetts. The Committee carries out the business of the Society, coordinating the acceptance of new members, overseeing the finances, and working with the Program Committee. As of this writing, there are 324 Active, 425 Senior, 53 Associate, 6 Candidate, and 2 Honorary Members, which includes 24 Active and six Candidate members newly elected this year. The important issues for the Executive Committee of the Society that are subjects of current study and work groups include: the sustainability of corporate educational and exhibit sponsorship of the Annual Meeting; the maintenance of the financial viability of the Society; and the preparations for the Society’s centennial.

The NESS continues its support of the Annual Research Presentation Day in the spring, where residents from all the teaching programs in New England present their work.

Next year’s Annual Meeting of the Society will be:

2017 Annual Meeting, September 8–10
Omni Mount Washington Hotel, Bretton Woods, New Hampshire
The Executive Committee is most grateful to Dr. Michael J. Zinner for his enthusiastic leadership as President through the past year, and looks forward to working with his successor, Dr. Bruce J. Leavitt.

Respectfully submitted,

David E. Clark, MD
Secretary
REPORT OF THE REPRESENTATIVE TO THE AMERICAN BOARD OF SURGERY

I. Entrustable Professional Activities

The ABS is investigating the potential of using entrustable professional activities (EPA’s) as a basis for the development of competency-based resident education. EPA’s are a recently developed concept designed to better organize and evaluate the clinical behaviors necessary to achieve competency in a specific domain of clinical activity. They are detailed descriptors of work which residents might be expected to do, and allow for evaluation of this at several levels of proficiency, with detailed and objective descriptions of the tasks which residents should be expected to complete at each level. Typically, five levels of proficiency are defined, and for operations these are generally described as:

1. Able to assist
2. Able to perform an operation with comprehensive supervision
3. Able to perform an operation with limited supervision
4. Able to perform an operation independently
5. Able to assist and teach others to perform an operation

Although EPA development has been carried forward in a number of medical schools over the last few years for defining medical student expected competencies, very little has been done at the residency level. Only pediatrics has had extensive experience with this, and the implementation of EPA’s in a test group of pediatrics training programs is currently going forward. Over the next 1–3 years the ABS will explore the potential of EPA’s to provide a framework for the move to surgical training which is more objective and competency based.

II. Residency Redesign

The board continues to move forward in planning for specific initiatives in regard to residency redesign. Currently we are trying to learn as much as possible from what other countries have done in this regard, since the problems we are confronting are relatively universal. Canada has been working on this project for at least five years, and is currently in the process of adopting competency based training across all medical specialties over the next five years. Surgical programs in the Netherlands have also reorganized in the last several years, and have redefined the scope of general surgery; the ABS is learning the details of this reorganization to see what specific ideas may be applicable here.

A central concept in moving forward residency redesign is the goal of developing competency-based surgical education wherever possible. The exploration of the EPA concept is one initiative directed toward that end. A second is to explore
better ways of providing more formal early training for medical students who are entering surgical programs, and of interns in their early clinical experience. The development of surgical preparatory courses or so-called “bootcamps” – 4–8 week long sessions of intensive education in basic surgical subjects at the end of the senior year of medical school, often after the match has been announced, is increasing steadily, and has currently been implemented in nearly a third of medical schools. The ABS with three other surgical organizations published a strong recommendation for their further development last year, and is working to increase the number of medical school deans who are willing to support this concept and provide resources for it. When that does not occur, increasing numbers of surgical residency programs are implementing similar training paradigms either immediately preceding the beginning of internship, or in the early months of internship, in an effort to bring interns up to speed more quickly for multiple basic surgical procedures. The surgery resident skills curriculum developed jointly by the American College of Surgeons and the Association of Program Directors in Surgery provides a readily available resource for this, with a well-defined curriculum and teaching materials.

Other concepts which are being discussed by the ABS for more effective residency training are efforts to improve faculty development in regard to intra-operative teaching, and efforts to promote greater resident autonomy and independence in the senior years of residency. In addition, the Flexible Endoscopy Curriculum (FEC) has been implemented by the Board as a requirement for residents graduating after June 2018, and the specifics of that effort are currently being implemented at each level of residency by surgical programs. The medical staff of the board are working closely with SAGES to implement the testing required to obtain Fundamentals of Endoscopic Surgery (FES) certification, and this has currently been achieved for a few hundred surgical residents. Lastly, the ABS this year implemented the option of taking the QE at the end of the PGY-4 year, in order to allow greater specialty concentration in the PGY-5 year, and 13 residents elected this option, with a 92% pass rate.

Joint meetings with representatives from the RRC—Surgery and the Association for Program Directors in Surgery were hosted by ABS in early April in an effort to increase the collaborative efforts of these organizations, and a meeting involving multiple surgical organizations was organized and hosted in Chicago by the American College of Surgeons in late May.

III. FIRST Trial

The board reviewed the progress and results of the FIRST trial, and elected to continue its support of this effort for a third year. The FIRST Trial to investigate the effects of less rigid resident hours requirements on patient safety and resident well-being was organized and funded jointly by the ABS, ACS, and ACGME, and the first year of this trial concluded in June 2015. The initial results
were presented in February 2016 and published in the New England Journal of Medicine. The trial was conducted for a second year, finishing in June 2016, but that data has not yet been analyzed. The data showed that relaxation of the duty hours did not affect patient safety or the quality of care, and led to significantly enhanced resident learning experiences and continuity of care. Because of concerns about some aspects of resident safety as a result of less rigid hours, the ACGME has asked that the study be conducted for a third year, which is currently in progress, and following that, the ACGME will evaluate all results in detail and make a decision regarding any change in resident duty hours which is warranted by the results.

IV. Maintenance of Certification

The requirements of maintenance of certification (MOC), which have been in place for 11 years, since their initiation by the ABMS in 2005, have increasingly been questioned across multiple specialties, beginning approximately 24 months ago because of dissent within the American Board of Internal Medicine by cardiologists and other specialists who felt that the requirements of that board were onerous, expensive, and ineffective. Subsequent to that, there has been increasing questioning of MOC across multiple other boards in regard to multiple issues. Dissent among the diplomates of surgical boards, including the ABS, has been muted compared to other boards, but several issues have been raised about the specifics of MOC as it is currently implemented, and their effectiveness in achieving the overall objective of improved patient care. The principal focus of objections has been the broad MOC examination, which is thought to require time and effort for study of subjects which are not beneficial to surgeons who practice in more focused areas. There have been multiple requests to develop modular examinations in additional areas which would allow greater flexibility for diplomates in recertifying, and would be more congruent with efforts they already make to keep up with their field. A second objection to the examination has been the expense, and the necessity to take time off from practice to take the test at a secure testing center often remote from their home. Lastly, there has been criticism of the Part II requirement of MOC that 2/3 of the CME requirements also require self-assessment, which makes acquisition of these credits more difficult. In order to better quantitate diplomate opinions and attitudes toward MOC, the ABS will conduct a widespread email survey of diplomates in September to evaluate the specifics in regard to the principal suggestions for change, and will use this as a basis for discussion of possible modifications at the January 2017 meeting. Diplomates are encouraged to communicate independently with any of the staff of the ABS if they wish to voice opinions about MOC as it currently is implemented, or if they have suggestions for improvement in its basic objective of improving the quality of patient care.
V. General Surgery Certifying Examination

The psychometrics of the Certifying (oral) Examination were intensively evaluated at the ABS’ June meeting, based on the last few years of data. As a result of this, it was decided that two major changes would be made in the grading for the examination, starting this year, which should significantly improve its psychometric characteristics. The first of these is to move from the current five levels of evaluation to three levels of evaluation, in order to have clearer and more precise definition of candidate performance.

The second change is to move to the use of individual case grades, rather than an aggregate score for each of the three rooms. This will provide for the generation of 24 grades for each candidate, rather than the current 6, and will allow for more granular and accurate characterization of candidate performance.

Both of these changes were strongly recommended by the psychometric staff of the board, and after extensive discussion in the Certifying Examination Committee and then in the full board, were adopted unanimously.

Similar changes will be made in the Certifying Examinations for pediatrics and complex surgical oncology.

VI. Definition of General Surgery

The current definition of General Surgery was revised by the General Surgery Advisory Committee (GENSAC) and approved by the Directors. This definition was carefully vetted by all members of the ABS and suggested changes incorporated into this final version. This document will be used to: communicate how the specialty of General Surgery is defined on the ABS website and Booklet of Information; assist the ABS as we consider the essential elements necessary to train an individual for certification in General Surgery; aid GENSAC as it deliberates issues that pertain to the specialty of General Surgery; and, reflect the components that are evaluated in the Maintenance of Certification process.

VII. Revision of the Defined Case Minimums

A working group composed of members of the ABS and RRC-Surgery undertook the task of revising the defined case minimums for General Surgery. Both organizations believed that the total case minimum requirement was too low and that there was need for greater specificity in the requirements. The current defined case minimums and ACGME surgery operative case logs for the last three years (2013–15) served as the primary data sources for the working group. The RRC-Surgery adopted the suggestions as recommended by the working
group. The ABS approved new requirements to reflect the actions of the RRC-Surgery. These include: an increase in the minimum total operative procedures during residency training from 750 to 850; an increase in the minimum chief resident year operative procedures from 150 to 200; and, an increase in the surgical critical care patient management minimum experience from 25 to 40.

Respectfully Submitted,

James Whiting, MD
Representative to the American Board of Surgery
REPORT OF THE REPRESENTATIVE TO THE
BOARD OF GOVERNORS OF THE
AMERICAN COLLEGE OF SURGEONS

The Board of Governors met the day prior to the opening of the American College of Surgeons meeting in Chicago in October, 2015. The format followed that of the last few years which are a number of reports to the Board of Governors from the leadership of the American College of Surgeons. For those who have not read this column before, the American College of Surgeons is run essentially by the Board of Regents, but the Board of Regents relies heavily on the Board of Governors to keep them in touch with the needs and desires of the membership. There has been a great deal of cooperation over the time that I have been the Society’s representative to the Board of Governors between the Board of Governors and Board of Regents. I gather that this was not always the case, but certainly seems to be now. The professional staff of the American College of Surgeons did give reports at this meeting and talked about a number of issues. These are generally outlined very effectively in the American College of Surgeons bulletin and also on their web page. Of concern to the members are issues regarding continuing medical education credits, some of which are obtained through the American College of Surgeons. The College is working diligently at this time to provide all types of CME credits including the self-assessment credits that are necessary for recertification and most statewide Board of Registration of Medicines. This will become a reality in the next few years, where the entire category 2 credits can be obtained.

The report from the political action committee in the American College of Surgeons showed once again that surgeons seem to be rather pitiful in their support of the political action committee. Certainly, no insult intended for those who do support this, but the percentage of support is quite small. Still, the College has managed to use their resources wisely and has had somewhat of an influence in policy creation. The sustainable growth plan was defeated in Congress recently, which was a great triumph for the College as well as other areas of organized medicine. Most importantly though, it is not the defeat of that bad plan, but rather that the Congress and Senate seemed to be interested in what the College would recommend as a replacement for it. Obviously, economic issues are important, and it was felt that most new projects need to be somewhat revenue neutral. Still, the College has placed itself in an enviable position of being able to offer advice and to give a plan to the elective representatives of the public. They recognize the expertise of the College in these fields. This is encouraging, and obviously, members are recommended to contribute to the political action committee. One only needs to look at the efforts of the orthopedic surgeons, anesthesiologists and especially the Society of Trial Lawyers to see a considerable higher level of participation.
The Board of Governors has its annual survey which is important as issues come up which are of importance, and this again is the source of some of the recent innovative programs to help general surgery graduates feel more comfortable as they ease into practice. The transitional year has been picked up by several places at the present time and hopefully will continue to improve. The College has been instrumental in cooperating with the Board of Surgery and other organizations to help create some of these programs.

The reports of the international chapters were included and the Board of Governors does have representatives from the various international chapters. These are very active, and there are places that are quite pleased to be part of the American College of Surgeons.

This will be my final report from the Board of Governors. I have appreciated the opportunity to help serve the Society and wish the next representative good luck in proceeding with this fine organization.

Respectfully Submitted,
Frederick R. Radke, MD
Representative to the American College of Surgeons
Board of Governors
REPORT OF THE REPRESENTATIVE TO THE AMERICAN COLLEGE OF SURGEONS ADVISORY COUNCIL FOR GENERAL SURGERY

The Advisory Council for General Surgery (ACGS) met at the American College of Surgeons (ACS) Clinical Congress 2015 in Chicago, IL, and again at the ACS Leadership & Advocacy Summit 2016 in Washington, DC, to discuss topics and activities relevant to the practice of general surgery. The ACGS was updated on and discussed the following:

- A statement was approved by the Board of Regents on team-based surgical care, which was drafted after discussions with the American Society of Anesthesiologists. The statement outlines the basis for moving forward with multidisciplinary teams for management of perioperative care; those guidelines are still under review.

- The Board of Regents approved a statement on the aging surgeon, which includes validated assessment measures and a process for addressing concerns related to performance.

- A Children’s Surgery Verification Program, which consists of a three-tiered designation of centers, is currently being piloted. The program does not imply that all children need to be cared for at a designated center.

- It was agreed to expand the ACGS membership and add a representative from the American Society of Transplant Surgeons.

- Educational material for home patient care, including the topics of central lines, wound management, ostomy care, and smoking cessation prior to surgery, was presented.

- Issues that continue to be priorities for the ACS Board of Regents including deficiencies in resident education and training, residency program redesign, gun safety, and the completion of the Quality Manual were reviewed.

- Overlapping and concurrent operations and the potential for government regulation or legislation was evaluated. A section on concurrent operations currently exists in the ACS Statements on Principles, and the ACS is currently in the process of expanding and clarifying its position on concurrent surgery.

- The Accreditation Council for Graduate Medical Education appointed a resident duty hours task force to review the results of the Flexibility in Duty Hour Requirements for Surgical Trainees Trial and consider whether changes in resident work hour restrictions should be implemented.
• The function of the ACS Central Judiciary Committee was reviewed as it relates to adjudication of complaints brought against surgeons for bad behavior.

• The ACS has an expert witness statement titled Statement on the Physician Acting as an Expert Witness, which establishes recommended guidelines for physicians who chose to act as an expert witness.

Respectfully Submitted,

David L. Berger, MD
Representative to the American College of Surgeons
Advisory Council for General Surgery
ABOUT THE NESS SCHOLARS FOUNDATION

Previously known as the Charitable Foundation, the New England Surgical Society Scholars Foundation was established in 1985 and is a 501(c)(3) non-profit organization.

Mission Statement: The Scholars Foundation exists to provide financial support to enhance the clinical and educational opportunities of the membership of the NESS in their efforts to strengthen the discipline of surgery in New England.

Activities currently supported include:

- **Scholar Research Grant**
  *Advances innovative surgical research via multiyear support*

- **ACS/NESS Health Policy and Management Scholarship**
  *Allows development of socioeconomic expertise within the society, via an annual scholarship to subsidize attendance and participation in the Executive Leadership Program in Health Policy and Management at Brandeis University*

- **Spring Resident and Fellow Research Presentation Day**
  *Promotes the professional development of young surgeons*

- **Annual Samuel Jason Mixter Lecture**
  *Expands the understanding of the national surgical environment*

- **Nathan Smith Award**
  *Acknowledges the distinguished service of an NESS member*

- **New Member, Resident Essay, and Best Poster Prizes at the Annual Meeting**
  *Acknowledges scholarship to the discipline of surgery*

It is anticipated that an increase in the Foundation’s endowment will also allow support for future activities such as a third world surgical mission and individual state educational grants to support MOC CME requirements.

The Foundation has established Contribution Levels to support its mission. A member’s donation level is cumulative, determined by the sum total of all his/her donations over time.

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*Listing reflects contributions received through August 22, 2016.*
JOHN C. BALDWIN, MD

1948–2016

John C. Baldwin, MD was born April 3, 2016 in Fort Worth, Texas. In high school he excelled as a varsity athlete and was a school valedictorian. He attended Harvard College where he received many prestigious awards and graduated summa cum laude. Following a year study at Oxford as a Rhodes Scholar, he began medical school at Stanford University and after completing both medical and surgical residencies at Massachusetts General Hospital, he returned to Stanford University to complete his training in cardiothoracic surgery under the tutelage of Dr. Norman Shumway. After he completed his training, Dr. Baldwin taught and practiced cardiothoracic surgery as a faculty member at Stanford where he became the director of the heart-lung transplantation program.

In 1988, he was appointed Chief of Cardiothoracic Surgery at Yale University School of Medicine, where he performed the first successful heart-lung transplant on the East Coast. In 1994, he joined Baylor College of Medicine, where he succeeded Dr. Michael DeBakey as Chairman of the Department of Surgery. Dr. Baldwin and his research team performed the first successful cardiac “auto-transplant” procedure when he removed a young man’s entire heart, excised an intracardiac tumor, and reimplanted the same heart back in the boy’s chest. During this time, he conducted research in gene therapy and growth factor utilization in cardiac care. He also worked to enhance the care provided in academic managed care systems.

In 1988, Dr. Baldwin became the medical school dean and associate provost for health affairs at Dartmouth College. Subsequently, he became president and CEO of the Harvard Immune Disease Institute from 2005–2007 and then president of Texas Tech University Health Science Center in 2007. During Dr. Baldwin’s presidency, the Texas Tech University Health Science Center El Paso campus received its accreditation as a four-year medical school. He resigned as president in 2009 but remained at Texas Tech as an advisor to the chancellor and as a tenured professor.

Dr. Baldwin was a national leader in health care policy and held numerous advisory roles in government and business. He was proud to have served on the board of the Robert F. Kennedy Foundation in defense of human rights throughout the world. In 2011, he was appointed by President Barack Obama to serve on the U.S. Defense Health Board. Dr. Baldwin died on April 3, 2016, following a swimming accident. His son, Andrew Baldwin MD, is currently a fourth year general surgery resident at Yale and will be pursuing a career in cardiothoracic surgery following in the footsteps of his father.

W.E.L.
JOHN P. CHANDLER, MD

1922–2014

John P. Chandler was a renaissance man from Milton, Massachusetts. He resembled the actor Gregory Peck physically and in expression.

His background was Dartmouth College and 2 year Dartmouth Medical School with completion of medical school at U Penn followed by residency back at the Hitchcock Clinic. He met an Ob-Gyn MD from Worcester while stationed in the Army in Germany. This brought him to Worcester to complete an additional year of residency at Memorial Hospital supervised by Dr. George Dunlop (former President of ACS and the NESS) He then joined Dr. Wilfred Small in practice. He later did a stint in Korea while Mrs. Betty Chandler raised children and danced ballet. Jack was predeceased by Betty after a 50 year romance. Jack is survived by sons John, Chris and, Tony and daughter Nini.

Jack was a quiet man when I first met him in 1980. I was a 36y.o. new chief of Surgery at Memorial Hospital in Worcester, Massachusetts and Jack was a seasoned 58y.o. surgical colleague. There was certainly “new kid on the block gossip” from most except Jack. He was comfortable in his own skin. He was confident of his surgical skill and success yet humble in behavior. When he opined on any subject despite how far removed the topic was from surgical wisdom, people listened in appreciation. His coolness under pressure was evidenced by a peaceful demeanor in the OR toward all participants in the case, no matter how often his brow was cleared of sweat. Jack’s partner, Wilfred Small had a knack of diverting several such cases to the 2 year younger, Dr Chandler. Jack was easy to like. Everyone trusted Jack to do the right thing and Jack on occasion trusted others too much.

Jack’s conversations with patients and their families would rate an A+ today in the new millennium of patient experience mania. He was ahead of the movement emphasizing patient centered care. His ability in this regard came from the happiness of a “balanced life”. This was an exception in general surgeons in the busy era of Medicare’s awakening.

Jack’s interests ranged from his saxophone participation in a jazz band to a very good game of chess at home or between cases. We colleagues were careful in the surgeon’s lounge if the game board was still in play when the surgeon players were back in the OR.

He was an outdoorsman in an old Dartmouth sweatshirt either bird shooting or fly fishing. He would play at golf and excelled at tennis.
Jack and Betty enjoyed entertaining at home in Worcester but the best was in Chatham. Both in Worcester and in Chatham the party and dinner guests were from all sorts of careers, interests, and languages. There were Professors in the arts from local colleges, musicians both employed and not, doctors from Haiti and neighbors. One such Chatham neighbor included a malpractice attorney not known until drinks were poured. Betty handled it well as I recall. There was a time when Jack wanted everyone to try their Spanish so as to converse more easily with some of the party attendees.

In my memory, Jack’s jokes were the best delivered and received. Audiences would cry with laughter at backyard barbecues and black tie testimonials!

Jack became a better and better watercolorist as the years progressed. One considered it fortunate to be gifted with a Chandler. He painted summers in Chatham, Massachusetts and in Maine and Vermont on fishing and trips.

Jack’s story is that of a TRUE New England GENTLEman who lived a full life and just happened to be a first class surgeon.

R.M.Q.
Dr. Joseph Michael Civetta passed away on March 30, 2016, in his home in the South Florida Keys with his wife, Judith Hudson-Civetta, at his side. Joe was born in Mount Vernon, N.Y. on May 2, 1938, the only son to his parents Rose Mildred Pirone and Michael Joseph Civetta. Joe graduated Magna Cum Laude in 1959 from the Holy Cross University in Worcester, Massachusetts and Summa Cum Laude from Boston University School of Medicine in Boston, Massachusetts in 1963, where he was awarded the title, Doctor of Medicine, with all of its rights and privileges. He completed an internship and residency at the Massachusetts General Hospital. Joe then served two years of military service as a Major in the U.S. Air Force at Keesler Air Force Base in Biloxi, Mississippi. He returned to Massachusetts General Hospital from 1970 to 1972 as Director of its Surgical Intensive Care Unit.

While at the MGH, he and Dr. Joe Gable literally described modern cardiovascular physiology.

Joe then began a long and illustrious career at the University of Miami Jackson Memorial Medical Center, where he rose to the rank of Full Professor of Surgery, Anesthesiology, Pathology and Medicine, and the Director of the Surgical Intensive Care Unit, from 1972 to 1997. Joe’s Critical Care fellowship produced five Presidents of the Eastern Association for the Surgery of Trauma (EAST) and three Presidents of the Society of Critical Care Medicine.

Joe Civetta left Miami to become the Chairman of Surgery at the University of Connecticut UConn Health Center and Director of Surgery at Hartford Hospital. He also assumed the role of General Surgery Residency Program Director and brought the UConn Residency Program to a whole, new level. In 2002, he retired from these posts, but remained as Vice Chairman of the Department of Surgery at UConn Health until 2012.

Joe was a prolific researcher and writer, and an innovative thinker. He is considered one of the founding fathers of Surgical Critical Care. His textbook, Surgery Critical Care, now in its fourth edition, has been the essential reference and guidebook to practitioners and fellows for over three decades. He strived to always improve the quality of care for the critically ill and taught the compassion and caring necessary to be an excellent caregiver. Joe leaves a legacy of the numerous fellows whom he trained and who now direct the major critical care departments throughout the country. Joe was President of the Society of Critical Care Medicine and presided over the 1981 World Congress; he was honored by a lifetime achievement award in 2005. Joe was a member of the American Surgical Association, the New England Surgical Society and the American Association for the Surgery of Trauma, to name a few prestigious organizations.
He retired with his wife Judy to the town of Islamorada, which is on the island of Tavernier in the Florida Keys, where he easily took on the island living culture. He loved deep-sea fishing, reading, target shooting, cooking and eating, and creating new recipes for which his family and friends dubbed him “Sir Mix-a-Lot.” He relished quality time with his children and grandchildren. He followed the example of his father in his enjoyment of telling jokes and making puns. Joe was competitive in everything from racecar driving to ping pong, with all who would dare to play with him, no matter what age. He was always ready to lend an ear and share life experiences. His critical thinking and perspective will be missed by family and colleagues alike. He sought deep connections with each of his children. It was his heart’s desire to know and grow with them. He was a devoted husband and loved his dear wife, Judith, beyond all else.

Joe is survived by his wife Judy, his five children, Nancy, Betsy, Peter, Jenny and Katy, fourteen grandchildren and his beloved mini-poodle, Ozzie. Joe Civetta is also survived by his brother-in-law James Hudson, his wife Patricia, niece Jennifer and her children.

O.C.K.
Doctor Nicolas P. W. Coe died on November 27, 2015 after a brief illness. He is survived by his loving wife Pam, a sister Vanessa, a brother Johnathan, as well as several nieces and nephews in the U.K. Nick graduated from Guy’s Hospital Medical School in 1969. He trained as a Junior and Senior Registrar at Guy’s Hospital, St. Bartholomew’s Hospital among other London hospitals before emigrating to the U.S. in 1975. He worked as a Research Fellow at Beth Israel Hospital between 1975 and 1976. He then moved to Springfield, MA and became a surgical resident at Baystate Medical Center and graduated in 1979. Becoming an American citizen in 1981, Nick worked at Baystate in private practice between 1979 and 1985 when he joined the full-time faculty with Paul Friedmann as Chairman. In 1991, he was promoted to Professor of Surgery, Tufts University School of Medicine. At Baystate, he was Associate Program Director, Director of the Office of Surgical Education and from 1993 to 2000 and Chief of the division of Endocrine and Metabolic Surgery. In 1995–1996, he was President of the Massachusetts Chapter of the American College of Surgeons as well as President of the Association for Surgical Education. Nick published extensively, belonged to many professional societies and received numerous teaching awards from Baystate residents and Tufts medical students.

I met Nick Coe for the first time in 1976. I was a new Attending at Baystate where I had trained and he was doing his obligatory repeat residency years. Not aware that Nick had trained in the U.K., I remember one day standing in the OR across from a tall resident and realized, “This guy’s no resident. He operates like an Attending!”

Nick was a man of many contradictions; his life was a tangle of soaring accomplishments and subtle tragedy. He was kind to a fault. Nick believed that the people around him were fundamentally good and trustworthy and he cultivated all of us as his friends. Accomplished in many domains, Nick was determined to assure that those around him were successful. Our surgical residents were his family, his kids. He was an accomplished surgeon, a virtuoso violinist and composer of original classical music. His symphony, A Song of the River about the Thames, is hauntingly beautiful. It seemed that everything he did was defined by a resolute core of professionalism.

However, not far beneath Nick’s reserved demeanor was a wild sense of the absurd. I first encountered his sense of humor early in the 1980s at one of the very first meetings of the Association for Surgical Education. As I recall, we were leaving the banquet hall mildly lubricated with adult beverages—in Nick’s case his favorite California chardonnay. Suddenly, Nick scooped up a white table cloth from a spare table and wrapped it around himself. And as conference
attendees streamed out of the hall, Nick regaled America’s top surgical educa-
tors with a Caesar-like oration in his clipped English accent—all of it profound silliness. A few years later, these same folks elected Nick President of the ASE.

I was told by the scrub tech and circulating nurse involved in the very first lap cholecystectomy at Baystate in 1990 when Nick, Chip Alexander and I performed the case that I had actually performed the surgery. I have always taken a great deal of pride in that accomplishment. Only much later, with time and self-reflection did I realize that Nick had quietly slipped into the assistant’s role to allow me to claim the honor of being “the first”.

But, what Nick Coe and I shared most over forty years of friendship and collegiality was an enduring commitment to educating medical students and surgical residents. Nick was not only a superb technical surgeon, he was a dedicated teacher and the steward of countless Baystate surgical graduates who have distinguished themselves in many surgical fields. I marvel at a mind that possessed an encyclopedic knowledge of surgery, wrote beautiful and haunting symphonic music as well as created a science-fiction world in three novels—the mind of a superbly talented human being.

In so many instances and with his subdued manner, Nick taught us that courage isn’t the sound of a sword rattling in its scabbard, but rather the quiet resolve to always do the right thing regardless of the opposition.

In this regard, Nick Coe was the reliable anchor of the ship we sail at Baystate Medical Center—our surgical residency program. Nick Coe was a dear friend. He filled a huge space in all of our hearts and I miss him every day.

D.W.P.
FRANCIS D. COGLIANO, MD

1934–2014

Francis D. Cogliano, MD (1934–2014) was the quintessential community general surgeon, and he was certainly beloved by that community. Admirers and beneficiaries of his many kindnesses include countless patients, staff, and colleagues at Brockton Hospital, as well as generations of Surgery residents and medical students from Boston University. Frank’s dedication to excellence in patient care and in Surgery education paralleled his wry wit and memorably roguish smile.

Cog was a true New Englander. A native of Everett, Massachusetts, he was reared in Providence, RI, where he attended Classical High School. He returned to Massachusetts for undergraduate studies at Tufts University, followed by medical school at Yale University. However, Cog was most proud of his residency days at Boston City Hospital and regaled all with stories from the (Harvard) Fifth Surgical Service.

Following Surgery training, Frank briefly left New England to serve as a surgeon in the United States Navy from 1967 to 1969, aboard the U.S.S. Coral Sea in the South China Sea. The lure of home eventually led to his appointment as Assistant Chief of Surgery at the Chelsea Naval Hospital.

Many of us will always recall Cog as a tremendous surgeon in an outstanding group of surgeons, including fellow NESS members David Marcello, MD and John Ambrosino, MD. In the operating room, Cog was undoubtedly technically gifted, but he was also fun to be around. Residents clamored to assist Cog in a practice that spanned the gamut of General Surgery, including a wide variety of challenging Vascular Surgery operations. He was a bright light in the dawn of a great era of Surgery. Frank was also a strong leader who promoted a culture of teamwork, rigorous preparation, and attention to every detail in the care of patients.

Frank Cogliano ultimately became Chief of Surgery at Brockton Hospital and a Clinical Professor of Surgery at the Boston University School of Medicine. His greatest professional joys likely derived from an intense commitment to the education of medical students and Surgery residents. The young physicians-to-be and surgeons were naturally drawn to Cog’s heartfelt interest in them and, in turn, honored him with numerous teaching awards, respect, and unending gratitude.

As devoted as Cog was to his practice and Brockton Hospital, he was even more dedicated to his family, including five children and eleven grandchildren, and to a zest for the beauty of life. In a town known for its love of the “Sweet Science” and the boxers whom it produced, Frank Cogliano was a sweet gentleman who deeply loved his patients and the community of Brockton.

D.M.C.
GEOFFREY COLEY, MD

1926–2016

Geoffrey Macdonell Coley, MD died peacefully at home at age 89 in Hartford, Connecticut on March 30, 2016, following a chronic illness during which his faithful wife and nurse Kathleen (Kate) lovingly cared for him at home. He leaves three children: Christopher and his wife Diane, Peter and his wife Sandrine, and Susan, as well as three grandchildren, Alex, Sam and Juliette and two brothers, Peter and William.

Born in New York City on December 28, 1926, he was the son of oncologic surgeon Bradley L. Coley and the grandson of William B. Coley MD, whose studies led to future understanding of the role of the immune system in cancer.

Dr. Coley graduated from St. Paul’s School, Yale College and Harvard Medical School, later completing his surgical training at Boston City Hospital and the Peter Bent Brigham Hospital. He also served in the U.S. Navy Medical Corps. In the midst of practicing general surgery at the Hartford Hospital for more than 35 years, he volunteered for several months on the hospital ship HOPE in Conakry Guinea in West Africa.

For a number of years, he organized the visiting surgical professor program at the hospital, hosting cutting-edge surgeons who taught residents over days of discussions, lectures and rounds. His reputation was one of a compassionate physician who cared for any sick individual he encountered with a gentle touch. At times he made rounds in patients’ homes. He loved his work, his patients, his workplace and the city; and after living in suburban West Hartford for years, he moved to an historic house in the central portion of Hartford within walking distance of the hospital.

As a young man, he was a talented golfer and baseball player, while in later years he cultivated many interests outside of medicine, including fly fishing for salmon in the Maritime Provinces of Canada following the annual nineteen-hour drive to his favorite fishing spot; hunting birds at a rural retreat in Sharon, Connecticut; spending summer weekends on Block Island, Rhode Island; skiing in the mountains of northern New England; attending Hartford Whalers hockey games whenever possible; and listening to jazz and reggae in Hartford. He regaled Jamaican personnel when playing reggae in the operating room. His three children were included in many of Dr. Coley’s activities outside of the hospital, and they bonded with him during these pursuits. His children sensed his passion for his work, and his son Christopher is presently an internist at the MGH.

Geoffrey is especially remembered for his gregarious nature, frequently with a pipe in his mouth in his younger days, his cheerful voice, and his unassuming, upbeat nature. His smile endured throughout his final days.

J.P.W.
JOSEPH P. DINEEN, MD

1929–2015

Joseph Patrick Dineen of Wolcott, CT died September 19, 2015. He was a graduate of Fordham University and Cornell University Medical College. He completed his surgical residency at New York Hospital. He later served honorably as a Captain in the United States Army.

He practiced Vascular Thoracic, Trauma and General Surgery. Not only was Dr. Dineen an excellent clinical surgeon but he was a caring, ethical humanitarian who devoted countless hours to the clinical care of his patients as well as improving delivery of Emergency Health Care in America. He served as the Chief of Surgery at Griffin Hospital in Derby, CT and was the Chief of Trauma at Saint Mary’s Hospital in Waterbury CT. He was honored for his work supporting first responders in CT and throughout the country by receiving the Norman E. McSwain leadership award at the National Association of Emergency Medical Technicians.

Dr. Dineen exhibited strong leadership for the trauma community in CT. He was a leading force in the Connecticut Trauma Committee and was involved in establishing guidelines for trauma care for the State of CT. He was involved in the establishment of the CT Trauma Conference which was a major educational force for all clinical providers of trauma within the state.

Dr. Dineen was a devoted husband and father and family man. His quiet and strong leadership will be greatly missed by his friends and colleagues throughout the region and the country. He epitomized the competent caring general surgeon.

L.M.J.
ANDREW J. DOWD, MD

1929–2014

A native of Springfield, MA Andrew Dowd received a Bachelor of Science in Chemistry from UMASS Amherst graduating cum laude in 1985.

Following a two year stint at Massachusetts General Hospital researching circadian cycles, he attended Loyola University Stritch School of Medicine in Chicago from which he graduated in 1992. Andrew began his categorical residency in the department of surgery at Brown University in June 1992. A very kind and poised resident Andrew was gifted with surgical skills and judgement beyond his years. Andrew pursued his love of academics reading voraciously in the scarce free time residents had in those days.

In July, 1997 he joined a surgical group in Westerly, RI. Combining his knowledge, surgical prowess and his love of forming relationships with his patients and co-workers, his practice thrived. Subsequently, Andrew chose to pursue a solo practice and spent as much time as possible with his wife and three children.

He later became more involved in leadership in the RI Medical Society and played an active role in the RI Chapter of the ACS. As a vocal representative of South County surgeons, Andrew served on this organization’s Council for many years.

In 2009 Andrew started what became a very successful varicose vein practice. Andrew was known for his genuine dedication to and interest in his patients & their family’s welfare. He was also known to be an excellent teacher to staff and patients alike. In 2014, he was named South County Hospital’s Chief of Surgery, the pinnacle of his professional career.

Dr. Dowd was also an extraordinarily talented artist, particularly a painter. Many of his beautiful works decorate the walls of homes and offices of loved ones.

Dr. Dowd leaves a legacy of a surgeon committed to the pursuit of excellence, to scientific exploration by surgical residents, and to clinical education focusing on the improvement of patient care.

P.J.M.
Dr. Robert Hopkins was Professor Emeritus of Medical Science at Brown University and former surgeon and Acting Chief-of-Surgery at Miriam Hospital in Providence. He was born and raised in Longmeadow, Massachusetts, and graduated from Classical High School in Longmeadow. He went on to attend both Harvard College (Class of 1945) and Harvard Medical School (Class of 1947). Robert became a surgeon, like his father and grandfather before him, completing his internship and surgical residency at the Massachusetts General Hospital before being called to serve as a lieutenant in the U.S. Navy in Korea. His duties as a surgeon on the hospital ship U.S.S. Repose earned him a Medal of Commendation from the United States Navy.

Robert began his medical career at the Pennsylvania Hospital as assistant surgeon and instructor in surgery at the University of Pennsylvania Medical School. He moved to the Cleveland Metropolitan General Hospital in 1959, where he served as an associate surgeon from 1959–1970. While there, Robert served as Director of Graduate Education for the Department of Surgery and Chief of Trauma and Emergency Services. He was also an associate professor of surgery at Case Western Reserve University School of Medicine in Cleveland. In 1970, Robert moved to Providence, Rhode Island, where he was recruited by Dr. Fiorindo Simeone to play an instrumental role in developing Brown University’s new medical program. Brown graduated its first class of physicians in 1975. Robert was Surgeon-in-Chief at the Miriam Hospital in Providence, Rhode Island, and joined the faculty of Brown University as Professor of Medical Science.

In 1980, Robert became the medical director of the Miriam’s Non-Invasive Vascular Laboratory, which was renamed the Robert W. Hopkins Non-Invasive Vascular Laboratory upon his retirement in 1996. While at the Miriam, he also served as a surgical consultant at Rhode Island Medical Center and Roger Williams General Hospital. Notably, Robert performed the first kidney transplant in Rhode Island in 1973 while at the Miriam. Robert was an active member of numerous medical societies, serving in leadership positions of several.

Robert authored numerous professional publications. He was President of the American Cancer Society, Rhode Island Division from 1973–77. He was Vice-President (1982–1983), President-Elect (1988–1989), and President (1989–1990) of the New England Society for Vascular Surgery. He was Vice-President and then President of the Society of Medical Consultants to the Armed Forces (1982–1984). He was Vice-President of the New England Surgical Society from 1984–1985. Other medical societies in which Robert was active include: the American Surgical Association; the American Association for the Advancement
of Science; the American Association for the Surgery of Trauma; the American College of Surgeons (both nationally and in the local chapter); the American Heart Association (Trustee of the Northeast Ohio Chapter, 1969–1971); the American Medical Association; the American Trauma Society; and the Society for Vascular Surgery (Distinguished Fellow). Even in his 90s, Robert continued to attend professional conferences and remained interested in the ever-evolving field of medicine.

P.J.M.
Dr. Thomas Joseph Krizek died at his home in Whittier, NC on August 5, 2015 at the age of 83 after a long struggle with cancer.

Dr. Krizek was born in Milwaukee to Elizabeth (nee Flynn) and Chester Krizek on December 1, 1932. He graduated from Marquette High School, Marquette University and Marquette Medical School (now Medical College of Wisconsin) all in Milwaukee. Trained in Jesuit schools in Milwaukee, he followed the Jesuit admonition, daring to “follow the question where it leads.” This training later transformed his approach to teaching with provocative questions, challenging dogma, and stimulating his students to think beyond the obvious.

After completing residencies in both General Surgery and Plastic Surgery at the Case Western Medical School, he was appointed Chief of Plastic Surgery at the Baltimore General Hospital in the Johns Hopkins Program. In 1968, he was recruited by Dr. Jack Cole, the new Chair of Surgery at Yale, to inaugurate a Section of Plastic Surgery within the Department of Surgery, and he was successful in establishing an ACGME approved residency at Yale in 1971, one of the earliest plastic surgery residencies in New England. He subsequently also served as Associate Dean of the School of Medicine.

After 10 years at Yale, he was recruited to serve as Professor and Chief of Plastic Surgery at Columbia University in New York; the University of Southern California in Los Angeles; and then at the University of Chicago, where he was subsequently served as Chairman of the Department of Surgery, as well as Interim Dean of the School of Medicine. Prior to his retirement, he made a final move to the University of South Florida where he served as Chief of Plastic Surgery and Vice-Chair of the Department of Surgery.

As a Plastic and Reconstructive Surgeon, Dr. Krizek published in many prominent medical journals. He was recognized, together with his long-time colleague Dr. Martin Robson, for establishing the concept of confirming surgical wound infections by quantitative bacterial counts. He made significant contributions to the understanding and treatment of thermal and radiation burns, and the use of biological dressings and skin allografts. He was an influential leader in plastic surgical education, serving on the ACGME Plastic Surgery Residency Review Committee, and as a Director and Vice-Chairman of the American Board of Plastic Surgery. He was a member of the most prestigious surgical societies; served as a Regent, and subsequently as First Vice-President of the American College of Surgeons; and as President of the American Association of Plastic Surgeons.

He loved teaching, and taught with passion, style, and dry humor. He was beloved by his medical students and residents, many of whom now also teach and hold leadership positions in major academic programs across the country.
After retiring from the practice of surgery, he pursued his love of learning and religion and received a Masters in Religious Studies and taught once more, but just in a different milieu-ethical issues. He was a master teacher all his life, and inspired intellectual integrity, responsibility, and joy in the everyday practice of medicine.

He returned to Yale in 2013 to give a Department of Surgery Grand Rounds in the Fitkin amphitheater to a standing-room-only audience. This audience included former residents and faculty colleagues who made it a point to be present at his well-recognized lectures.

He is deeply missed by his students, residents, and many colleagues at the various Universities in which he taught.

S.A.

M.H.M
JOHN ALFRED MALCOLM, MD

1924–2014

Dr. John Alfred Malcolm, of Cambridge, Massachusetts died July 21, 2014. He had led a full and productive life as a thoracic surgeon.

Dr. Malcolm was born in England on October 24, 1924. The family settled in Cleveland, Ohio, where he attended Western Reserve Academy. He then went on to Harvard College. During the 2nd World War he enlisted as a hospital corpsman and was active in the medical corps in the “Battle of the Bulge”.

After the war he reentered Harvard College and then Harvard Medical School graduating in 1952. He was trained in general surgery at the Massachusetts General Hospital. There he won a Mosely Traveling Fellowship to study thoracic surgery with Ronald Belsey for 8 months and George Mason for 4 months. He returned to the MGH for 6 months and then finished a thoracic surgical program at Bellevue and Presbyterian Hospitals in New York City.

He was then appointed as Chief of Thoracic Surgery at the New York City Veteran’s Hospital. He later worked in Boston with Dr. Irving Madoff at several community hospitals on the South Shore.

Dr. Malcolm was a student of history. When he retired from surgery, he then spent several years as a special student at Harvard. In his last decade John developed Parkinson’s disease which slowed his activities greatly.

Dr. Malcolm’s wife Olive (Polly) Goldman survives him, together with their four adult children: George Winston Malcolm of Franklin, Katherine Malcolm Stolman of Cambridge, Barbara Malcolm Krementy of Providence, RI, and Charles Malcolm, a teacher at the Northfield-Mount Hermon School in Massachusetts. There are 5 grandchildren.

This writer was a member of John’s Medical School Class. He was a nice man all around. He was greatly loved by his patients. Our class is dwindling in members as we are mostly in our nineties. Those living remember John Malcolm very fondly.

W.H.H.
JOHN H. SEASHORE, MD

1939–2014

John Harold Seashore M.D., 75 of New Haven Connecticut passed away on December 5 2014 at Yale New Haven Hospital. He was the beloved husband of 50 years to Margretta Reed Seashore. Born in Springfield MA. June 18, 1939, he is survived by his children, sons Robert of New Haven, Carl of Chapel Hill NC and daughter Carolyn of Denver CO as well as his twin sister Anne of Tampa FL and three grandchildren.

After graduating from White Plains High School, he attended Yale College and later Yale Medical School, graduating in 1965. John served his internship and residency in general surgery at Yale New Haven Hospital, A highlight during his training was a three month rotation at the Albert Schweitzer Hospital in Haiti. After his residency he went on to a Pediatric Surgery Fellowship at the University of Florida in Gainesville and a subsequent year on the Faculty with James Talbert, his training mentor.

Subsequently John was recruited to join the Faculty at Yale in the Section of Pediatric Surgery where he served for 31 years before retiring in June 2004. John had a distinguished academic career in General Surgery, rising from Assistant to Full Professor, serving on numerous Hospital and Medical School Committees, including being President of the Medical Staff and Program Director in General Surgery during a difficult transition period when lower work hours for trainees were imposed by the ACGME. He was honored by the Department of Pediatrics with the Pediatric Faculty Teaching Award, the Distinguished Service Award in honor of his 31 years to Yale Surgery, and shortly before his death by the Yale Surgical Society at its Annual Lecture and Dinner.

His pediatric surgery colleagues and former residents remember John for his compassionate care and diligence in the care of his patients. For many years he was the “go-to” physician for advice and leadership as intravenous nutrition became a clinical mainstay. He knew how to make ordering of the solution both safe and simple, John was a master surgeon and inspired many of our residents to choose a career in pediatric surgery.

John showed great courage in dealing with personal health issues after he underwent spinal surgery and later with amyloid angiopathy that caused physical debility. He endured all with grace and dignity his wife Greta always at his side. Dr. Seashore will be remembered as a special friend, and teacher, by all who knew him.

R.J.T.
DAVID M. SENSENIG, MD

1921–2016

Dr. David M. Sensenig died January 31, 2016 at his home. David was born in Gladwyne, PA on May 4, 1921. He attended The Haverford School and graduated from Haverford College, and subsequently earned his medical degree from Harvard Medical School in 1945.

He served in the US Army during World War II. He was trained in Thoracic and Cardiovascular Surgery. Following training, he established a surgical practice in Bangor, Maine. He was a diplomate of the American Board of Surgery and the American Board of Thoracic Surgery. He was the first Board Certified Thoracic Surgeon on the staff of Eastern Maine Medical Center.

While at Eastern Maine Medical Center, he was known as a man with an affable, energetic personality and exceptional surgical skill. He developed a large surgical practice encompassing general, thoracic, and vascular surgery, and was the first to implant a permanent pacemaker at Eastern Maine Medical Center in 1967.

Because of his busy practice, he was known to be in the hospital at all hours of the day. Despite long hours of work and the demands placed upon him, he was always even-tempered and congenial. This demeanor caused him to be known as the ‘blithe spirit’ among his peers.

David took time to contribute to medical literature, authoring or co-authoring more than twenty articles for periodicals and journals. He also served as Chief of Surgery with the Maine Veterans Administration for a number of years.

David retired from the practice of medicine in 1995, only to enter Temple University School of Law, graduating in 1998. The remainder of his life was spent in Lansdale, PA with his beloved wife of forty-one years, Bernice.

D.M.L.
WILLIAM R. THOMPSON, MD

1951–2015

William R. Thompson, M.D., a revered surgeon in the Rhode Island medical community for over half a decade, died on January 15, 2015 from cancer.

Bill Thompson was born in the logging and paper mill town of Livermore Falls, Maine. He graduated from the University of Maine at Orono in 1951, and Cornell University School of Medicine in 1955. He began his surgical training at Rhode Island Hospital, where he returned to join the surgical staff after serving the United States Navy as an active flight surgeon. It is at Rhode Island Hospital where, in the early 1960s, Dr. Thompson, along with his partner, Dr. J. Robert Bowen, organized Surgical Group, Inc. Surgical Group grew to include Drs. Brian Dorman, Clarence Soderberg, Thomas Shahinian and Victor Pricolo, and quickly earned the reputation as the preeminent group of surgeons in Rhode Island.

Bill had a clear vision for both Surgical Group and the Department of Surgery at Rhode Island Hospital, always striving for nothing less than the best. He worked tirelessly toward this goal, and was a true leader and mentor to his colleagues and to all of the interns and residents who trained under him. His passion for surgery and the practice of medicine was matched closely by his zeal for his favorite pastime, fishing. Bill, being a Mainer, loved the outdoors and all that went with it. One of his favorite fishing adventures was his annual trek to Labrador to fly fish for the legendary wild brook trout, and he put as much effort into perfecting his skill with a fly rod as he did with a scalpel.

Bill Thompson was stalwart, a quietly kind and gentle man who lived his life simply in pursuit of excellence, whether it was in his role as a surgeon and servant to the ill and suffering, or while fishing for trout in Labrador. Always, he would strive to be the best. With Bill Thompson’s passing, the New England surgical community has lost an iconic figure—a skilled surgeon and an authentic gentleman. He will be fondly remembered and always missed.

T.K.S.
GORDON VINEYARD, MD
1936–2015

Gordon (“Gordy”) Vineyard was one of the great teachers of surgery. He was willing to critique each step in microscopic detail. I can hear his voice now, “Now stop. Just stop. Put your hands down. Now, I think that you are just a terrific surgeon, but you don’t understand my concept.” He was a master of all of general surgery: kidney transplantation, low anterior resection, hernia repair, and thyroidectomy instantly spring to mind.

Gordon was born in Little Rock, Arkansas and graduated from Central High School. He was recruited to Yale as a swimmer, at the time that Yale was a powerhouse in NCAA swimming. Gordy went on to major in engineering, graduating from Yale in 1959. Engineering became a lifelong interest (see below). He matriculated to the Harvard Medical School, graduating in 1963, and then undertook his surgery training at the Peter Bent Brigham Hospital. During his training, Gordon was drafted in a special Viet Nam call-up and was assigned to the Naval Medical Research Institute in Bethesda from 1965–1967. At last, in 1972, upon finishing his residency, he was appointed to the staff at PBBH as the Director of Outpatient Clinics. This was the first of many important departmental roles in which he served. In particular, he was prominently one of the principal renal transplant surgeons. He went on to found the Department of Surgery at one of the first HMO’s in New England: the Harvard Community Health Plan. His Department had a longstanding close relationship to the PBBH (and then Brigham and Women’s) surgery department, functioning as a crucible for young faculty members at the beginning of their surgical practice. HCHP had a uniquely high standard of surgical care due to his meticulous oversight and visionary cost containment. When HCHP became the much larger entity, Harvard Vanguard Medical Associates, Gordon became its Chief of Surgery, and then Interim CEO, the position that he held at his retirement. In keeping with this late career in healthcare delivery, he served as President and then Chairman of the Board of the Massachusetts Health Data Consortium. In recognition of his expertise, the Department of Surgery at Brigham and Women’s, through the generosity of his good friend (and patient) Marilyn Link, started an annual lecture series in his name, based on the topic of the societal impact of surgery. Interestingly, Marilynn Link is the half-sister to the developer of the 1st airplane flight simulator (which also interested Gordon intensely).

As mentioned above, Gordon’s intellectual curiosity included a fascination with engineering. He was in the vanguard of bioengineering thinking throughout his career. While at the NIH in 1966, he was a pioneer in the use of hydroxyethyl starch (“Hespan”) as a blood substitute, performing the initial animal experimentation. He also evaluated the use of silicone tubing as a common duct replacement. Gordon was one of the first American surgeons to perform colonoscopy,
reporting an initial experience of 105 cases to the New England Surgical in 1972. He went on to publish on the first colonoscopic snaring of a colon polyp and on facilitating the passage of a colonoscope (at the time, fiberoptic with a discouragingly dim view of the way forward). He painstakingly taught his resident trainees in this fledgling art. As well, he devised and patented a sleeve to go into the rectum, able to elongate and contract, in that way “crawling” up the colon with the colonoscope attached. In 1985, he became a Director of Lifeline Systems, Inc., the manufacturer of a familiar device to ensure patient safety while at home.

Sailboats were a significant passion for Gordon, using Marion, Massachusetts as his home port. Initially, it was local competition in the Shields One-Design class, followed by his Mercer 44, where he took to the open ocean and then won the biennial Marion to Bermuda race in his J46. In keeping with his passion for teaching, he taught his children to be expert sailors. His son, Sam, went to the finals of the Sears Bowl, the coveted national junior sailing championship.

Tragically, Gordon developed the characteristic tremor of Parkinson’s disease as he retired, a particularly difficult diagnosis for one so accustomed to expert manual dexterity. He bore this burden with great dignity. Even as the disability advanced, flashes of Gordon’s humor and insight were ever present. He died on May 5, 2015 of complications of his Parkinson’s, having taken a bad fall at this home. He is survived by his wife, Phyllis, and his children, Sam and Amanda. We miss his humane wisdom, charm, and steadfast dedication to teaching and innovation. His patients miss him more.

F.D.M.
Samuel Jason Mixter was chosen President of the newly formed New England Surgical Society in 1917, just one year before he was elected President of the American Surgical Association. Born in Western Massachusetts in Hardwick (1855), he was educated at the Massachusetts Institute of Technology (1875) and Harvard Medical School (1879). After serving as West Surgical House Officer at the Massachusetts General Hospital, he studied anatomy and the new science of microscopic anatomy in Vienna which he brought back to the Harvard Medical School Department of Anatomy. He soon changed careers and became surgeon at the Carney Hospital and the Massachusetts General Hospital and finished his surgical career as Chief of the West Surgical Service at the Massachusetts General Hospital. His anatomical skills and mechanical ingenuity made him a surgical genius and his innate honesty and sound judgment made him a great physician. He was the first in America to successfully resect a Zenker’s diverticulum of the esophagus, pioneered in Gasserian ganglion surgery and performed one of the first successful hypophysectomies. He helped to develop the new frontiers of abdominal surgery and was skilled in surgery of bones and joints, head and neck, breast tumors and pediatrics.

Dr. Mixter’s kind, gentle and hospitable nature was felt when he guided visiting surgeons, as well recorded by William Mayo, to operative clinics and staff meetings at the hospital and when his many guests shared the happiness of his home. His non-surgical interests had to do with life in the open air with sports, gardening, and breeding Guernsey cattle.

A rich and rewarding family life followed his marriage in 1879 to Wilhelmina Galloupe (1879) of Swampscott. The marriage was blessed with four sons, two of whom—William Jason Mixter and Charles Galloupe Mixter—were members of the New England Surgical Society as was his grandson, Charles G. Mixter, Jr., and is his great-grandson, Charles G. Mixter, III.

His loyalty to his country was demonstrated in World War I when, incensed by the German brutality, he left a life of complete retirement to join the Medical Reserve Corps. As a consultant he made numerous tours of the Eastern military camps. He remained in the Medical Reserve Corps, attaining the rank of Colonel one year before his death.

Dr. Mixter died in 1926, a scant year after the death of his wife. His life exemplified in all respects the qualities that our Society demands of its new members: “surgeons with the attributes of a gentleman, i.e., basic honesty, kindness, tolerance, equanimity, good manners and social consciousness.”
1985  Lord Rodney Smith, Marlow, England
1986  Martin Adson, MD, Rochester, Minnesota
1987  Joseph P. Vacanti, MD, Boston, Massachusetts
1988  F. Griffith Pearson, MD, Toronto, Ontario, Canada
1989  Alexander Walt, MD, Huntington Woods, Michigan
1990  Professor Peter Morris, Oxford, England
1991  Lazar J. Greenfield, MD, Ann Arbor, Michigan
1992  Paul A. Ebert, MD, Chicago, Illinois
1993  Thomas E. Starzl, MD, Pittsburgh, Pennsylvania
1994  John E. Niederhuber, MD, Stanford, California
1995  Jonathan E. Rhoads, MD, Philadelphia, Pennsylvania
1996  M. Judah Folkman, MD, Boston, Massachusetts
1997  Samuel A. Wells, Jr., MD, St. Louis, Missouri
1998  Paul S. Russell, MD, Boston, Massachusetts
1999  Bernard Fisher, MD, Pittsburgh, Pennsylvania
2000  John L. Cameron, MD, Baltimore, Maryland
2001  Glenn D. Steele, Jr., MD, Chicago, Illinois
2002  Thomas J. Krizek, MD, Wesley Chapel, Florida
2003  David L. Nahrwold, MD, Chicago, Illinois
2004  Irving L. Kron, MD, Charlottesville, Virginia
2005  Patricia K. Donahoe, MD, Boston, Massachusetts
2006  Murray F. Brennan, MD, New York, New York
2007  Andrew L. Warshaw, MD, Boston, Massachusetts
2008  Lucian L. Leape, MD, Boston, Massachusetts
2009  Atul A. Gawande, MD, Boston, Massachusetts
2010  David H. Sachs, MD, Boston, Massachusetts
2011  David B. Hoyt, MD, Chicago, Illinois
2012  Barry Mills, Brunswick, Maine
2013  Peter J. Deckers, MD, Farmington, Connecticut
2014  Thomas H. Cogbill, MD, La Crosse, Wisconsin
2015  Dorry L. Segev, MD, Baltimore, Maryland
2016  Atul A. Gawande, MD, Boston, Massachusetts
Nathan Smith, the first all-New England surgeon, was one of the most remarkable
men ever to adorn the American surgical profession. Born in 1762 in Rehoboth,
Massachusetts, his only education was from his parents, his father being a farmer-
surveyor and his mother a midwife; from Doctor Josiah Goodhue, a prominent
surgeon of the upper Connecticut Valley, and from the Harvard Medical School
near the time of its inception. In addition he accomplished a period of eight
months of study in Edinburgh and London.

During his long career, he was a major force in the establishment and development
of Dartmouth Medical School while he developed an extensive surgical practice
in the upper Connecticut Valley. Success in upper New England was followed by
an appointment in the new Yale Medical School, where he made contributions as
a surgeon, teacher and practitioner with attention to the necessary requirements
of politics. He further directly contributed to the establishment of the new medi-
cal school at Bowdoin College and to the new medical school at the University
of Vermont.

During this time his contributions to the practice of surgery were of great impor-
tance. Essays on typhus (typhoid) fever, on the pathology and treatment of necro-
sis (osteomyelitis) and in the performance of ovarian cystectomy were no-table.
Other reports described new methods for fashioning skin flaps following amputa-
tion and the use of various apparatus for the treatment of fractures of the extremi-
ties. His record in urinary lithotomy was enviable.

No evaluation of this remarkable man would be complete without mention of
his family. All four of his sons graduated from Yale Medical School and nine
grandsons, six great-grandsons and at last count one great-great grandson entered
medicine.

In the New England area and perhaps in the country, no man contributed more
than did Nathan Smith, not only to the birth of surgery as a specialty, but to the
early evolution of the medical teaching institution. As a surgeon, as a teacher and
as a person of high intellectual and moral quality, there is no one who surpasses
him.

Gordon A. Donaldson, MD
Presidential Address, New England Surgical Society, 1977
1985 Claude E. Welch, MD, Boston, Massachusetts
1989 Francis D. Moore, MD, Boston, Massachusetts
1991 Joseph E. Murray, MD, Boston, Massachusetts
1992 George R. Dunlop, MD, Worcester, Massachusetts
1994 John F. Burke, MD, Boston, Massachusetts
1995 Frank J. Lepreau, Jr., MD, Westport, Massachusetts
1996 Harry C. McDade, MD, Littleton, New Hampshire
1997 John H. Davis, MD, Burlington, Vermont
1999 John A. Mannick, MD, Boston, Massachusetts
2000 Hermes C. Grillo, MD, Boston, Massachusetts
2001 Charles L. Thayer, MD, New Castle, New Hampshire
2002 W. Gerald Austen, MD, Boston, Massachusetts
2003 No Award Given
2004 Susan Briggs, MD, Boston, Massachusetts
2005 Michael R. Curci, MD, Portland, Maine
2006 Erwin F. Hirsch, MD, Boston, Massachusetts
2007 Charles J. McCabe, MD, Boston, Massachusetts
2008 Richard W. Dow, MD, Lebanon, New Hampshire
2009 No Award Given
2010 Grant V. Rodkey, MD, West Roxbury, Massachusetts
2011 Stanley J. Dudrick, MD, Waterbury, Connecticut
2012 No Award Given
2013 W. Hardy Hendren, MD, Duxbury, Massachusetts
2014 Albert W. Dibbins, MD, Portland, Maine
2015 Bruce J. Leavitt, MD, Burlington, Vermont
2016 H. David Crombie, MD, Windsor, Connecticut
INSTRUCTIONS TO AUTHORS FOR MANUSCRIPTS SELECTED FOR PRESENTATION AT THE ANNUAL MEETING

The Journal of the American College of Surgeons (JACS) is the official publication of the New England Surgical Society. Podium Presentations require manuscript submission to the JACS; Brief Reports are strongly encouraged to submit manuscripts but not required to do so; likewise, Poster Presentations are encouraged but not required to submit manuscripts. In order for these papers to be published in the JACS, whether in the NESS Annual Meeting issue or later, these guidelines for submission must be followed closely and carefully:

1. Do **not** submit your manuscript to JACS before the meeting. Your manuscript must be submitted to JACS by **October 14, 2016** (within four weeks after the Annual Meeting).

2. For **formatting and style requirements**, follow “Manuscript Preparation Details” at http://www.journalacs.org/authorinfo.

3. On the **title page** at the bottom type “Presented at the New England Surgical Society, 2016 Annual Meeting, Boston, MA, September 2016.”

4. The corresponding author must complete and submit an Author Contributions form, and each author must complete the JACS Disclosure form. These forms (available as Word documents at http://www.journalacs.org/authorinfo) must be uploaded with the manuscript submission.

5. Make all revisions to the paper **before** submitting to JACS. Again, **October 14, 2016**, is the deadline for uploading your paper.

6. **Register and log-on** at http://editorialmanager.com/jacs/ and follow instructions for uploading the manuscript.

7. **PLEASE NOTE:** Be certain to scroll down and choose “New England Surgical Society” from the “article type” drop-down menu. Do **not** select “original scientific article.”
<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Author</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>1987</td>
<td>Predicting Hospital Charges for Trauma Care</td>
<td>Susan E. Pories, MD</td>
<td>Burlington, VT</td>
</tr>
<tr>
<td>1988</td>
<td>Liver Abscess – The Need for Complete Gastrointestinal Evaluation</td>
<td>Jeffrey L. Cohen, MD</td>
<td>Burlington, MA</td>
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<tr>
<td>1989</td>
<td>Albumin Therapy in the Critically Ill: A Prospective Randomized Trial</td>
<td>Eugene F. Foley, MD</td>
<td>Boston, MA</td>
</tr>
<tr>
<td>1990</td>
<td>Patterns of Venous Incompetence in Patients with Varicose Veins</td>
<td>Lawrence M. Hanrahan, MD</td>
<td>Boston, MA</td>
</tr>
<tr>
<td>1991</td>
<td>Preliminary Assessment of a Basic Science Curriculum in a Surgical Residency Program</td>
<td>David B. Safran, MD</td>
<td>Hartford, CT</td>
</tr>
<tr>
<td>1992</td>
<td>Continuous Arteriovenous Hemofiltration Attenuates Polymorphonuclear Leukocyte Phagocytosis in Porcine Intra-Abdominal Sepsis</td>
<td>Anthony W. DiScipio, MD</td>
<td>Lebanon, NH</td>
</tr>
<tr>
<td>1993</td>
<td>Parastomal Hernia: Is Stoma Relocation Superior to Fascial Repair?</td>
<td>Marc S. Rubin, MD</td>
<td>Boston, MA</td>
</tr>
<tr>
<td>1994</td>
<td>Prostaglandin Protects Renal Cortical Blood During Infrarenal Aortic Clamping</td>
<td>Elias J. Arbid, MD</td>
<td>Boston, MA</td>
</tr>
<tr>
<td>1995</td>
<td>Moose Motor Vehicle Collision: An Increasing Hazard of Northern New England Life</td>
<td>Timothy M. Farrell, MD</td>
<td>Lebanon, NH</td>
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</tbody>
</table>
1996

First Place
The Impact of Histopathology on Nodal Metastases in Minimally Invasive Breast Cancer
Isha A. Mustafa, MD, Providence, Rhode Island

Second Place
The Use of Authentic Angiotensin II in the Treatment of Refractory Septic Shock
Mary B. Harler, MD, Providence, Rhode Island

Third Place
Gastrointestinal Complications are Predictable Following Cardiac Surgery
Richard A. Perugini, MD, Worcester, Massachusetts

1997

First Place
Effect of Delayed Fluid Resuscitation on Cerebral Hemodynamics in a Swine Model of Head Injury and Simulated Uncontrolled Hemorrhagic Shock
Paul R. Bourguignon, MD, Burlington, Vermont

Second Place
Influence of Peritoneal Cytology on Treatment of Patients with Pancreatic Cancer
Martin A. Makary, Boston, Massachusetts

Third Place
Neoadjuvant Chemo-Radiotherapy for Esophageal Cancer. Is it Worthwhile?
Wael Z. Tamin, MD, Worcester, Massachusetts

1998

First Place
Does Uninjured Skin Release Pro-Inflammatory Cytokines Following Trauma and Hemorrhage?
Robert A. Catania, MD, Providence, Rhode Island

Second Place
Percutaneous Sclerosis of Recurrent Thyroid Cysts
Sara W. Mayo, MD, Portland, Maine

Third Place
Extracorporeal Membrane Oxygenation for Non-Neonatal Acute Respiratory Failure
Peter T. Masiakos, MD, Boston, Massachusetts
1999

First Place
Mechanisms of the Salutary Effects of Dehydroepiandrosterone Following Trauma-Hemorrhage: Direct or Indirect Effects on Cardiac and Hepatocellular Functions
Doraid Jarrar, MD, Providence, Rhode Island

Second Place
Impact of Laparoscopic Staging in the Treatment of Pancreatic Carcinoma
Ramon E. Jimenez, MD, Boston, Massachusetts

Third Place
Is Admission for Pediatric Trauma Patients with Isolated Head Injury and Normal Head CT Scan Necessary?
Bernard Benedetto, MD, Springfield, Massachusetts

2000

First Place
Ten-Year Experience with 734 Pancreatic Resections: Changing Indications, Older Patients, and Decreasing Length of Hospitalization
James H. Balcom, IV, MD, Boston, Massachusetts

Second Place
Repair of Pectus Excavatum Deformities in Children: A New Perspective of Treatment Using Minimal Access Surgical Technique
Peter C. Wu, MD, Hartford, Connecticut

Third Place
The Effect of Grade and Surgery on Outcome of Gastrointestinal Stromal Tumors
Jean-Pierre E.N. Pierie, MD, PhD, Boston, Massachusetts

2001

First Place
Abnormal Motility in Ulcerative Colitis: Role of Inflammatory Cytokines
Matthew D. Vrees, MD, Providence, Rhode Island

Second Place
Late Outcomes After Laparoscopic Surgery for Gastroesophageal Reflux Disease
Jean Y. Liu, MD, White River Junction, Vermont
Third Place
Hand-Assisted Laparoscopic Liver Surgery
Marc Anotonetti, MD, Hartford, Connecticut

2002
First Place
MEN2: Genotype-Phenotype Analysis
Linwah Yip, MD, Houston, Texas

Second Place
Casting Type Calcifications with Invasion and High-Grade DCIS: A More Aggressive Disease?
Raul G. Zunzunegui, MD, Providence, Rhode Island

Third Place
Minimally Invasive Collis Gastroplasty: Institutional Experience
David H. Rothstein, MD, Portland, Maine

Third Place
Management of Adult Splenic Injury: A 20-year Perspective
Kimberly L. Hartnett, MD, Portland, Maine

2003
First Place
Major Lower Extremity Amputation: Outcome of a Modern Series
Bernadette Aulivola, MD, Boston, Massachusetts

Second Place
Is Completion Lymphadenectomy Following a Positive Sentinel Lymph Node Biopsy for Malignant Cutaneous Melanoma Always Necessary?
Nathel Elias, MD, Boston, Massachusetts

2004
First Place
Poly ADP-Ribose Polymerase (PARP) Inhibition Modulates Skeletal Muscle Injury Following Ischemia Reperfusion
Hong T. Hua, MD, Boston, MA

Second Place
Carotid Endarterectomy in 1650 Patients Under 60 Years Old: Implications for Screening
Desarom Teso, MD, Waterbury, Connecticut
Third Place
Localizing Colorectal Cancer by Colonoscopy: Are We Missing the Boat?
Nicole P. Piscatelli, MD, Burlington, Vermont

2005
First Place
Neoadjuvant Therapy and Local Recurrence in Pancreatic Adenocarcinoma
Sarah E. Greer, MD, Lebanon, New Hampshire

Second Place
Risk Factors for the Development of Abdominal Abscess Following Operation for Perforated Appendicitis: A Multi-Center Case Control Study
Marion C.W. Henry, MD, New Haven, Connecticut

Third Place (tie)
Is Right Hemicolectomy for 2.0 cm Appendiceal Carcinoids Justified
Zubin M. Bamboat, MD, Boston, Massachusetts

Women in Surgery: Do We Really Understand the Deterrents?
Debra A. Gargiulo, MD, Burlington, Vermont

2006
First Place
Evolving Patterns in the Detection of Pancreatic Neuroendocrine Tumors (PNETs): The Massachusetts General Hospital Experience from 1977 – 2005
Parsia A. Vagefi, MD, Boston, Massachusetts

Second Place
Improved Outcome Following Colectomy for Fulminant Pseudomembranous Colitis (PMC)
Syed O. Ali, MD, Hartford, Connecticut

Third Place
Endoscopically Assisted Laparoscopic Resections of Submucosal Gastric and GE Junction Tumors: A Novel Approach to Resection Based on Tumor Location
Alicia Privette, MD, Burlington, Vermont
2007

**First Place**
*Improving Communication in the Surgical Intensive Care Unit: A Prospective Trial*
Mallory Williams, MD, Boston, Massachusetts

**Second Place**
*Do All Patients Undergoing Parathyroidectomy Require Additional Neck Exploration When Intraoperative PTH Levels Do Not Decrease Appropriately?*
Patrick B. O’Neal, MD, Boston, Massachusetts

**Third Place**
*Angiographic Embolization for Gastroduodenal Hemorrhage: Safety, Efficacy, and Predictors of Outcome*
George A. Poultsides, MD, Farmington, Connecticut

2008

**First Place**
*Extracorporeal Membrane Oxygenation for Non-neonatal Acute Respiratory Failure: The Massachusetts General Hospital Experience from 1990 to 2008*
Deepika Nehra, MD, Boston, Massachusetts

**Second Place**
*Fulminant Clostridium Difficile Colitis: Patterns of Care and Predictors of Mortality*
Elizabeth A Sailhamer, MD, Boston, Massachusetts

**Third Place**
*Outcomes Following Thyroidectomy and Parathyroidectomy in Pregnant Women in the US*
SreyRam Kuy, MD, New Haven, Connecticut

2009

**First Place**
*Family and Gender Impact Career Goals: Results of a National Survey of 4586 Surgery Residents*
Kate V. Viola, MD, Yale University School of Medicine, New Haven, Connecticut

**Second Place**
*Surgery and Radiation Therapy for Abdominal and Retroperitoneal Sarcoma: Both Necessary and Sufficient?*
Jessica P. Simons, MD, University of Massachusetts Medical School, Worcester, Massachusetts
Third Place
Pre-Operative Predictors of Positive or Close Margins Following Initial Partial Mastectomy for Breast Cancer
Alicia R. Privette, MD, University of Vermont/Fletcher Allen Health Care, Burlington, Vermont

2010
First Place
Acute Cholecystitis in the Elderly. Is Cholecystectomy Necessary?
Edward McGillicuddy, MD, Yale University School of Medicine

Second Place
The CT Diagnosis of Pneumatosis Intestinalis: Clinical Measures Predictive of the Need for Surgical Intervention
Vincent Duron, MD, Brown Medical School

Third Place
Aeromedical Transport of Patients With Traumatic Injuries: Discharge Within 24 Hours
Meredith Sorensen, MD, Dartmouth Hitchcock Medical Center

2011
First Place
The Clinical and Economic Impact of a Sustained Program in Global Plastic Surgery: Valuing Cleft Care in Resource-Poor Settings
Christopher D. Hughes, MD, University of Connecticut School of Medicine

Second Place
Join the Club: Impact of Resident and Attending Social Interactions on Overall Satisfaction Among 4,390 General Surgery Residents
Michael C. Sullivan, MD, Yale School of Medicine

Third Place
Variability in Utilization of Neoadjuvant Chemotherapy in Treatment of Women with Invasive Breast Cancer Eligible for Breast Conservation Therapy
Jill K. Onesti, MD, Grand Rapids Medical Education Partners
2012

First Place
Graduating Surgical Resident Operative Confidence: Insights into Residency Training Environment
Annabelle L. Fonseca, MD, Yale University School of Medicine, Department of Surgery

Second Place
Secondary Overtriage: The Burden of Unnecessary Interfacility Transfers in a Rural Trauma System
Meredith J. Sorensen, MD, Dartmouth Hitchcock Medical Center

Third Place
Impact of Immunocompromised Status on Outcomes in Patients with Necrotizing Soft Tissue Infection
Emily K. Zeung, MD, Brigham and Women’s Hospital

2013

First Place
Reducing Postoperative Venous Thromboembolism Complications with a Standardized Risk-Stratified Protocol and Mobilization Program
Michael R. Cassidy, Boston University Medical Center

Second Place
Epidemiology and Outcomes of C. Difficile Infections in the Elderly
Courtney Collins, University of Massachusetts

Third Place
Impact of Insurance Type on Pancreatic Cancer Outcomes: A Decade in Review
Mariam Eskander, Beth Israel Deaconess Medical Center

2014

First Place (tie)
Peri-Operative Bundle Reduces Post-Operative Hepatic Surgery Infections
Maureen V. Hill, MD, Dartmouth Hitchcock Medical Center

The Liver Transplant Timeline: A Comparison of Patients with and without Hepatocellular Carcinoma from Listing to Post-Transplant Care
Madhukar S. Patel, MD, Massachusetts General Hospital/Harvard Medical School
2015

First Place
Suboptimal Compliance with NCCN Melanoma Guidelines: Who Is at Risk?
Andrew M. Blakely, MD, Rhode Island Hospital/Brown University

Second Place
Operative vs. Non-Operative Management of Pediatric Blunt Pancreatic Trauma: Evaluation of the National Trauma Data Bank
Maria Carmen Mora, MD, Baystate Medical Center, Tufts University School of Medicine
NEW MEMBER AWARD RECIPIENTS

Sponsored by the NESS Scholars Foundation

2003  First Place (tie)
The Cost of Operative Training for Residents
Timothy J. Babineau, MD, Boston, Massachusetts

Renal Transplant Survival from Older Donors: A Single Center Experience
Paul E. Morrissey, MD, Providence, Rhode Island

2004  First Place
Reduction of Hyperglycemia and Nosocomial Infections in a General-Surgical Intensive-Care Unit
George A. Perdrizet, MD, Hartford, Connecticut

2005  First Place
Treatment of Hepatic Abscess
David A. Iannitti, MD, Providence, Rhode Island

2006  First Place
Enhancing Compliance with Medicare Guidelines for Surgical Infection Prevention (SIP): An Institutional Experience with a Cross Disciplinary Quality Improvement Team
Laurence E. McCahill, MD, Burlington, Vermont

2007 – No award given.
2010

2011  First Place
Long Term Complications After MammoSite Brachytherapy Compared to Whole Breast Radiation Therapy
Kari M. Rosenkranz, MD, Lebanon, New Hampshire

2012 – No award given.
2015
2005  Decellularized Ovine Arterial Tissue: A Three-Dimensional Tubular Scaffold For Tissue Engineering Small Diameter Vascular Conduits
Matthew P. Brennan, MD, Yale University, New Haven, Connecticut

2006  A Simplified Technique for Single Stage Breast Reconstruction
William G. Austen, Jr., MD, Massachusetts General Hospital, Boston, Massachusetts

2007  Clinical Outcomes in Patients With Severe Diabetic Foot Ulcers Treated With and Without Hyperbaric Oxygen
George A. Perdrizet, MD, University of Connecticut, Hartford Hospital, Hartford, Connecticut

2008  Immunohistological Characterization of Tissue Engineered Graft Remodeling in Severe Combined Immunodeficient/Beige (SCID/bg) Mouse Model
Rajendra F. Sawh-Martinez, BS, Yale University School of Medicine

2009  N-acetyl-L-cysteine (NAC) Reduces Intraabdominal Adhesion Formation Through The Upregulation of Peritoneal Fibrinolytic Activity And Antioxidant Defenses
Daniel I. Chu, MD, Boston University School of Medicine

2010  Oral Resvaratrol Supplementation Reverses Glucose Intolerance: The Role of Skeletal Muscle and the Liver
Michael P. Robich, MD, Beth Israel Deaconess Medical Center, Boston, MA

2011  Photochemical Tissue Bonding Improves Colonic Anastomotic Strength
Prabhu Senthil-Kumar, MD, Massachusetts General Hospital
2012 Colon Cancer Metastases Are Not Infiltrated by Favorably Prognostic T Cells: Evidence for the Escape Phase of the Cancer Immunoediting Hypothesis in Humans
Bryan P. Stanifer, MD, Dartmouth Hitchcock Medical Center

2013 A Novel Approach to Targeted Oncologic Therapy – Co-Culture Viability of Polymer Prodrug Conjugation to Mesenchymal Stem Cells
Kaitlyn Wong, Baystate Medical Center

2014 Effective Triage of Early Stage Lung Cancer Patients in Community Hospitals Yields Low Surgical Mortality
Christopher T. Ducko, Brigham and Women’s Hospital

2015 Improving Perioperative Counseling for Emergency Abdominal Surgery: Creation of a Scoring Tool to Predict One-Year Mortality in the Elderly
Olubode A. Olufajo, MD, Brigham and Women’s Hospital, Boston, Massachusetts
ACS/NESS HEALTH POLICY AND MANAGEMENT SCHOLARSHIP RECIPIENTS

Sponsored by the NESS Scholars Foundation

The American College of Surgeons and the New England Surgical Society Scholars Foundation offer an annual scholarship to subsidize attendance and participation in the Executive Leadership Program in Health Policy and Management at Brandeis University in Waltham, Massachusetts. The award is in the amount of $8,000, to be used toward the cost of tuition, travel, housing, and subsistence during the period of the course.

2012 Joel D. Lafleur, MD, Rockport, Maine

2013 Michael P. Hirsh, MD, Northboro, Massachusetts

2014 David McAneny, MD, Boston, Massachusetts

2015 Neal E. Seymour, MD, Springfield, Massachusetts

2016 Christopher S. Muratore, MD, Providence, Rhode Island

SCHOLARS RESEARCH GRANT RECIPIENTS

Sponsored by the NESS Scholars Foundation

The Scholars Research Grant allows the recipient to pursue research in diverse areas of medicine. The purpose of the Scholars Research Grant is to advance innovative surgical research via multiyear support. The recipient of this grant will be awarded $10,000 in the initial year; the grant can then be renewed by review of the NESS Scholars Foundation Board of Trustees for a succeeding year, for up to an additional $10,000.

2014 The Role of Neuropilin-1 (NRP1) on Dendritic Cells in the Tolerogenic Liver Environment
Heung Bae Kim, MD, Children’s Hospital, Boston, Massachusetts

2015 Documentation of Enteric Neurogenesis in an In Vivo Murine Model
Robert A. Cowles, MD, Yale University, New Haven, Connecticut

2016 Assessment of the Correlation Between Gastric Morphology, Gastric Emptying, Post Prandial GLP-1 Response, and Hunger Scores Following Longitudinal Sleeve Gastrectomy
Richard A. Perugini, MD, University of Massachusetts Memorial Medical Center, Worcester, Massachusetts
NEW ENGLAND SURGICAL SOCIETY

2016 ANNUAL MEETING

SEPTEMBER 16 – SEPTEMBER 18, 2016

THE SEAPORT HOTEL

BOSTON, MASSACHUSETTS

FRIDAY, SEPTEMBER 16, 2016

9:00 AM – 5:00 PM  REGISTRATION
                   Plaza Ballroom Foyer

9:00 AM – 5:00 PM  SPEAKER READY ROOM
                   Plaza Ballroom Foyer

9:00 AM – 5:00 PM  POSTER SET-UP
                   Plaza Ballroom C

12:00 PM – 3:00 PM  EXHIBIT HALL HOURS
                    Plaza Ballroom C
Scientific Session I
1:00 PM – 2:30 PM
Plaza Ballroom AB
Moderator: Michael J. Zinner

Podium papers 8-minute presentation/5-minute discussion.
Brief papers 3-minute presentation/2-minute discussion.

±1. William W.L. Glenn: Surgeon-Scientist, Inventor, and NESS President
   *Andrew C.W. Baldwin, *John C. Baldwin, Walter E. Longo
   Yale School of Medicine, New Haven, CT

2. BASIC SCIENCE SECOND PLACE AWARD – NESS RESIDENT AND FELLOW RESEARCH DAY
   Sponsored by the NESS Scholars Foundation
   Overcoming Barriers to Survival Following Pig-to-Baboon Liver Xenotransplantation
   *Jigesh A. Shah, *Matthew J. O’Neil, James F. Markmann,
   *David H. Sachs, Parsia A. Vagefi
   Center for Transplantation Sciences Massachusetts General Hospital/Harvard Medical School, Boston, MA

±3. The Benefits of a Surgical Rotation in an International Setting
   *Molly J. Douglas, Michael Curci
   Maine Medical Center, Portland, ME

#4. The Well-Being of Surgical Trainees in New England
   Peter S. Yoo, *John J. Tackett, *Mark W. Maxfield,
   Walter E. Longo
   Yale School of Medicine, New Haven, CT

± RPE Eligible Papers
* NESS Non-Members
# New Member Prize Eligible
#5. Using High-Reliability Organization Principles to Improve Communication During High-Fidelity Trauma Simulation
Bridgeport Hospital, Yale–New Haven Health System, Bridgeport, CT

Brief 1. The “Colonial Wig” Pancreaticojejunostomy: ZeroLeaks with a Novel Technique for Reconstruction After Pancreaticoduodenectomy”
*Xihua Steve Yang1, *Pouya Aghajafari1, *Shirali T. Patel2, *Steven C. Cunningham2
1Saint Agnes Hospital, Ellicott City, MD; 2Saint Agnes Hospital and Cancer Institute, Ellicott City, MD

Brief 2. Post-Operative Vital Sign Profiles Following Bowel Resection: A Comparison Based Upon Modality of Surgery
1University of Massachusetts Memorial Medical Center, Worcester, MA; 2University of Vermont Medical Center, Burlington, VT; 3University of Chicago Medical Center, Chicago, IL

Brief 3. Sacral Nerve Modulation for Fecal Incontinence; Five-Year Experience
*Anne C. Granfield, Steven Schechter, *Leslie Roth, Adam Klipfel
Brown University, Providence, RI

# New Member Prize Eligible
* NESS Non-Members
Brief 4. Metastasectomy Following Immunotherapy with Adoptive Cell Transfer or Ipilimumab for Patients with Advanced Melanoma
Surgery Branch, NCI, NIH, Bethesda, MD

Brief 5. Efficacy of C-Reactive Protein Measurement in Predicting Postoperative Morbidity and Pancreatic Fistula Following Pancreaticoduodenectomy
Yale University, New Haven, CT

2:30 PM – 3:00 PM COFFEE BREAK: VISIT EXHIBITS & POSTERS
Plaza Ballroom C

Scientific Session II
3:00 PM – 5:00 PM
Plaza Ballroom AB
Moderator: Kari Rosenkranz

Podium papers 8-minute presentation/5-minute discussion.
Brief papers 3-minute presentation/2-minute discussion.

±6. SLC12A7 Amplifications Promote Adrenocortical Cancer Cell Invasiveness
Yale University School of Medicine, Department of Surgery, New Haven, CT

± RPE Eligible Papers
* NESS Non-Members
±7. Relationship of Breast MRI to Recurrence Rates in Patients Undergoing Breast-Conservation Treatment
*Maureen V. Hill¹, *Julia L. Beeman¹, *Khushboo N. Jhala², Richard J. Barth, Jr.¹
¹Dartmouth Hitchcock Medical Center, Lebanon, NH; ²Geisel School of Medicine, Hanover, NH

8. Prevalence of Contralateral Tumors in Patients with Follicular Variant of Papillary Thyroid Cancer
*Michael C. Sullivan¹, *Paul H. Graham², *Erik K. Alexander¹, *Daniel T. Ruan¹, Matthew Nehs¹, Atul A. Gawande¹, Francis D. Moore, Jr.¹, *Brooke Howitt¹, *Kyle C. Strickland¹, *Jeffrey F. Krane¹, *Justine A. Barletta¹, *Nancy L. Cho¹
¹Brigham and Women’s Hospital, Boston, MA; ²MD Anderson Cancer Center, Houston, TX

±9. Vascular Endothelial Growth Factor Accelerates Compensatory Lung Growth by Increasing Alveolar Units
Boston Children’s Hospital, Boston, MA

±10. CLINICAL SCIENCE FIRST PLACE AWARD – NESS RESIDENT AND FELLOW RESEARCH DAY
Sponsored by the NESS Scholars Foundation
Wide Variation and Excessive Dosage of Narcotic Prescriptions for Common General Surgical Procedures
*Maureen V. Hill¹, *Michelle L. McMahon², *Ryland S. Stucke¹, Rick J. Barth, Jr.¹
¹Dartmouth Hitchcock Medical Center, Lebanon, NH; ²Geisel School of Medicine, Hanover, NH

11. Parathyroidectomy After Kidney Transplant Is Associated with Increased Graft Failure
Yale University School of Medicine, New Haven, CT

± RPE Eligible Papers
* NESS Non-Members
±12. An Evaluation of a Standardized Risk-Based Venous Thromboembolism Prophylaxis Protocol in the Setting of Thyroid and Parathyroid Surgery
*Ryan Macht¹, *Ivy Gardner², *Pamela Rosenkranz¹, Gerard Doherty¹, David McAneny¹
¹Boston Medical Center, Boston, MA; ²Boston University School of Medicine, Boston, MA

13. The Role of Computed Tomography in the Diagnosis of Necrotizing Soft Tissue Infections
Massachusetts General Hospital, Boston, MA

Brief 6. For the Treatment of Primary Hyperparathyroidism Routine Four Gland Exploration Performed on an Outpatient Basis Is As Successful and Safe As a Less Invasive Approach
*Marcoandrea Giorgi, *Seungjun Kim, Peter J. Mazzaglia
Brown University, Providence, RI

Brief 7. Resident and Fellow Participation in Thyroid and Parathyroid Surgery: An American College of Surgeons NSQIP Clinical Outcomes Analysis
Tufts Medical Center, Boston, MA

¹Southcoast Health, Alpert Medical School of Brown University, North Dartmouth, MA; ²Southcoast Health, North Dartmouth, MA; ³Harvard University, Cambridge, MA; ⁴Yale University, New Haven, CT

± RPE Eligible Papers
* NESS Non-Members
5:00 PM – 5:45 PM  STATE CAUCUS MEETINGS  
Connecticut – Seaport B  
Maine – Seaport A  
Massachusetts – Plaza Ballroom AB  
New Hampshire – Seaport C  
Rhode Island – Constitution  
Vermont – Flagship A

6:00 PM – 7:00 PM  WELCOME RECEPTION  
Lighthouse Ballroom
SATURDAY, SEPTEMBER 17, 2016

7:00 AM – 12:00 PM  REGISTRATION
Plaza Ballroom Foyer

7:00 AM – 12:00 PM  SPEAKER READY ROOM
Plaza Ballroom Foyer

7:00 AM – 10:35 AM  EXHIBIT HALL HOURS
Plaza Ballroom C

SPECIALTY GROUP BREAKFAST
7:00 AM – 7:45 AM

Topic 1:  Resident & Physician Wellness
Seaport A
Sponsored by the Committee on GME and
Candidate Membership

Faculty:  Data/Statistics
Kurt Rhynhart

Presentation
Peter Yoo

Question & Answer
Anne Larkin

Next Steps
James Hebert and Walter Longo

Topic 2:  Global Health
Seaport B

Faculty:  Bruce J. Leavitt & Michael R. Curci

7:00 AM – 8:00 AM  CONTINENTAL BREAKFAST
Plaza Ballroom C
Scientific Session III
7:45 AM – 8:40 AM
Plaza Ballroom AB
Moderator: Anne C. Larkin

Podium papers 8-minute presentation/5-minute discussion.
Brief papers 3-minute presentation/2-minute discussion.

±14. Renalase Inhibition Induces Melanogenesis Via MAPK and PI3K/AKT Signaling Pathways
*Lindsay Hollander1,3, *Xiaojia Guo1,3, *Robert Saffierstein1,3, *Gary Desir1,3, Charles Cha1,3
1Yale University, New Haven, CT; 2University of Connecticut, Farmington, CT; 3VACHS, West Haven, CT

#15. Surgical Technique and Time to Adjuvant Chemotherapy in Breast Cancer Patients
1Yale University, New Haven, CT; 2Thomas Jefferson University, Philadelphia, PA

± RPE Eligible Papers
* NESS Non-Members
# New Member Prize Eligible
±16. The Significance of Upfront Knowledge When It Comes to N2 Disease in Non-Small Cell Lung Cancer
Yale School of Medicine, New Haven, CT

±17. Do Packed Red Blood Cell Transfusions Really Worsen Oncologic Outcomes in Colon Cancer?
*Ramzi Amri, *Anne Dinaux, *Hiroko Kunitake, Liliana Bordeianou, David Berger
Harvard Medical School/Massachusetts General Hospital, Boston, MA

8:40 AM – 8:55 AM INTRODUCTION OF NEW MEMBERS
Plaza Ballroom AB
Papers of the Year & Scientific Session IV
8:55 AM – 10:10 AM
Plaza Ballroom AB
Moderator: Dougald MacGillivray

Podium papers 8-minute presentation/5-minute discussion.
Brief papers 3-minute presentation/2-minute discussion.

18. RECOGNITION OF PAPER OF THE YEAR CO-AWARD
Prognosis of Invasive Intraductal Papillary Mucinous Neoplasm Depends on Histological and Precursor Epithelial Subtypes

19. PAPER OF THE YEAR CO-AWARD
Laparoscopic Sleeve Gastrectomy Has Morbidity and Effectiveness Positioned Between the Band and the Bypass
Matthew M. Hutter¹, Bruce D. Schirmer², Daniel B. Jones³, Clifford Y. Ko⁴, Mark E. Cohen⁵, Ryan P. Merkow⁶, Ninh T. Nguyen⁷
¹Department of Surgery, Massachusetts General Hospital, Boston, MA; ²Department of Surgery, University of Virginia Health System, Charlottesville, VA; ³Department of Surgery, Beth Israel Deaconess Medical Center, Boston, MA; ⁴Department of Surgery, University of California, Los Angeles Medical Center, Los Angeles, CA; ⁵American College of Surgeons, Chicago, IL; ⁶Department of Surgery, University of Colorado Hospital, Aurora, CO; ⁷Department of Surgery, University of California, Irvine School of Medicine, Irvine, CA
1Baystate Medical Center, Springfield, MA; 2Baystate Children’s Hospital, Tufts University School of Medicine, Springfield, MA

1Center for Advanced Intestinal Rehabilitation, Department of Surgery, Boston Children’s Hospital and Harvard Medical School, Boston, MA; 2Vermont Oxford Network, Burlington, VT; 3University of Vermont, Burlington, VT

Brief 9. Defining Success After Gastric Bypass in the Super-Super Obese
Dartmouth Hitchcock Medical Center, Lebanon, NH

Brief 10. Multivisceral Resection for Malignant Hepatic Lesions Is Associated with Increased Morbidity
1St. Mary’s Hospital, Waterbury, CT; 2University of Massachusetts, Worcester, MA

± RPE Eligible Papers
* NESS Non-Members
Brief 11. What Are the Long-Term Outcomes of Laparoscopic Paraesophageal Hernia Repairs Without Mesh?
*Damien J. Lazar¹, Desmond H. Birkett², David M. Brams², *Heather A. Ford², Dmitry Nepomnayshy²
¹Tufts University School of Medicine, Boston, MA; ²Lahey Hospital and Medical Center, Burlington, MA

Brief 12. Detection of Tumor-Specific Mutations in Circulating, Cell-Free DNA: Potential for a Biomarker in Esophageal Adenocarcinoma
*Matthew Egyud¹, *Jennifer Jackson¹, *Emiko Yamada¹, *Anders Stahlberg², *Virginia Litle¹, *Tony Godfrey¹
¹Boston Medical Center, Boston, MA; ²University of Gothenburg, Gothenburg, Sweden

10:10 AM – 10:40 AM COFFEE BREAK WITH POSTER SESSION, VISIT EXHIBITS
Plaza Ballroom C

* NESS Non-Members
POSTERS

*P1. Analysis of Trends of Breast Cancer Recurrence Detection
*Trishul Kapoor, Ted James
University of Vermont, College of Medicine, Burlington, VT

*P2. Unplanned Reoperation After Hepatectomy: An Analysis of Risk Factors
Brigham and Women’s Hospital/Harvard Medical School, Boston, MA

*P3. Improving ACGME Compliance Using Resident Run Lean Process
Frederick H. Millham1, *Suliat Nurudeen2, *Joseph Mets2, *Christopher Burns1, Douglas Smink2
1 South Shore Hospital, Weymouth, MA; 2 Brigham and Women’s Hospital, Boston, MA

*P4. Impact of the ‘July Effect’ on Pancreaticoduodenectomy
Yale University, New Haven, CT

*P5. Impact of a 12 Lymph Node Harvest Quality Metric on Colon Cancer Outcomes
Harvard Medical School/Massachusetts General Hospital, Boston, MA

*P6. Outcomes of Patients on Reduced Immunosuppression After Renal Transplantation
Brown University, Providence, RI

* Poster of Distinction
* NESS Non-Members
•P7. Hepatocellular Carcinoma in Transplantable Patients with Well Compensated Cirrhosis: Transplantation Does Not Provide a Survival Benefit
  Massachusetts General Hospital, Boston, MA

•P8. Repair of Ischemic Mitral Regurgitation During Coronary Artery Bypass Grafting: Good Outcomes with a Complex Disease
  Maine Medical Center, Portland, ME

•P9. “Never Events” in Cardiac Surgery: Serious Reportable Events Continue to Occur in Our Patients
  *Michael P. Robich¹, Alik Farber², Reed Quinn¹,
  *Denis Rybin², *Douglas Sawyer¹, *Gheorghe Doros², Robert Kramer¹, *Jeffrey J. Siracuse²
  ¹Maine Medical Center, Portland, ME; ²Boston Medical Center, Boston, MA

•P10. Predictors of Mortality in Nonagenarian and Centenarian Emergency Surgery Patients: A Decision Making Aid
  *Myriam M. Martinez Aguilar, *Thomas Peponis,
  *Jordan D. Bohnen, *Naveen F. Sangji, *Anirudh R. Nandan,
  *Kelsey Han, *Marc A. DeMoya, George C. Velmahos,
  *Dante D. Yeh, *David R. King, *David C. Chang,
  Haytham M.A. Kaafarani
  Massachusetts General Hospital, Boston, MA

P11. Use of Hyperspectral Imaging to Assess Vascular Dysfunction in Patients with Diabetes
  *Gianluca Citoni, *Brandon Sumpio, *Jason Chin,
  Bauer Sumpio
  Yale University, New Haven, CT

* Poster of Distinction
* NESS Non-Members
P12. Reduced Racial Disparity in Outcomes of Kidney Transplant Recipients

*E. Iranpour, *A. Tavabi, *Reginald Gohh, Paul Morrissey, Reza Saidi

Brown University, Providence, Ri

P13. Contemporary Analysis of Malignancies in Women of Child-Bearing Age: An NSQIP Analysis


University of Massachusetts Medical School, Worcester, MA


South Shore Hospital, Weymouth, MA

P15. Revisiting the Evidence: Intraoperative Cholangiography During Cholecystectomy Among Hospitalized Medicare Beneficiaries


The Center for Surgery and Public Health at Brigham and Women’s Hospital, Boston, MA


*Rachel K. Brickman1, *Sarah E. Billmeier2, Gina L. Adrales2,3

1Geisel School of Medicine at Dartmouth, Hanover, NH; 2Dartmouth-Hitchcock Medical Center, Lebanon, NH; 3The Johns Hopkins Hospital, Baltimore, MD

P17. Incidental Congenital Small Bowel Malrotation in the Adult Population: Review of Diagnostic and Treatment Strategies


Dartmouth Hitchcock Medical Center, Lebanon, NH

* NESS Non-Members
P18. Safety of Minimally Invasive Distal Pancreatectomy Outside a High Volume Center
*Christian Arroyo¹, *David Eisenberg², *Michael Carlton²,
*Michael O’Loughlin², *Christina Wai², Ramon Jimenez³
¹University of Connecticut Medical School, Farmington, CT;
²Hartford Hospital, Hartford, CT

P19. Outcomes and Effects of an Advanced Endoscopy Center and GI Center of Excellence on Pancreatic Cancer Surgical Volume
*Rachel E. Beard, *Mariam F. Eskander, *Gyulnara Kasumova,
*Abhishek Tadikonda, *Tyler M. Berzin, *Mandeep Sawhney,
*Ram Chuttani, *Douglas K. Pleskow, Mark P. Callery,
Jennifer F. Tseng
Beth Israel Deaconess Medical Center, Boston, MA

P20. Surgeon Performed Ultrasound Is Highly Beneficial in the Post-Operative Surveillance of Thyroid Cancer Patients
*Liudmila Muraveika¹, *Vanessa Baratta², *Travis Cotton¹,
Peter Mazzaglia¹
¹Brown University, Department of Surgery, Providence, RI;
²Brown University, Warren Alpert School of Medicine, Providence, RI

P21. Improved Gastric Cancer Lymph Node Staging Following Multidisciplinary Tumor Board Initiative
*Whitney A. Young, *Anne C. Granfield, *Rachel E. Sargent,
*Howard P. Safran, Thomas J. Miner
Rhode Island Hospital, Providence, RI

*Andrew M. Blakely¹, *Danielle S. Comissiong²,
Michael P. Vezeridis¹, Thomas J. Miner¹
¹Rhode Island Hospital/Brown University, Providence, RI;
²Brown University, Providence, RI

P23. Mathematical Modeling of Serotonin-Induced Increases in Intestinal Mucosal Surface Area
*Chasen J. Greig, Robert A. Cowles
Yale School of Medicine, New Haven, CT

* NESS Non-Members
P24. Preoperative Systemic Inflammation Is a Crucial Risk Factor for the Development of Venous Thromboembolism Following Emergency Colon Resection  
1Yale School of Medicine, New Haven, CT; 2Park Surgical Associates, Brockton, MA; 3University of Pittsburgh Medical Center, Pittsburgh, PA

P25. What’s Missing in ICU Delirium Assessment? The Importance of CAM-Unable-to-Assess  
*Foula Kontonicolas, D’Andrea Joseph, Ilene Staff, Mark Flemming, Molly Zeppa, Karyn L. Butler, Hartford Hospital, Hartford, CT

P26. Rothman Index Variability Predicts Clinical Deterioration and Rapid Response Team Activation  
*Brian Wengerter, *Kevin Pei, *David Asuzu, Kimberly A. Davis  
Yale University School of Medicine, New Haven, CT

P27. A Comparative Analysis of Perioperative Outcomes Between Open Distal Pancreatectomy Versus Minimally Invasive Approaches Using the American College of Surgeons National Quality Improvement Program Targeted Pancreatectomy Dataset  
1Department of General Surgery, Brigham and Women’s Hospital, Boston, MA; 2Department of General Surgery, Western University, London Health Sciences Centre, London, ON, Canada; 3Department of Anesthesiology, Preoperative and Pain Medicine, Brigham and Women’s Hospital, Boston, MA

* NESS Non-Members
P28. Impact of Pathologic Complete Response to Neoadjuvant Treatment on Rectal Cancer Recurrence Rates

Massachusetts General Hospital/Harvard Medical School, Boston, MA

P29. Cost-Effectiveness of Non-Operative Management of Inguinal Hernias in the Elderly: A Markov Model

*Karina A. Newhall1, *Maureen Hill1, *Philip P. Goodney1,2, Timothy Counihan1,2
1Dartmouth Hitchcock Medical Center, Lebanon, NH; 2White River Junction Veterans Administration Hospital, White River Junction, VT

P30. The National Rise of Primary Pancreatic Carcinoid Tumors: Comparison to Functional and Non-Functional Pancreatic Neuroendocrine Tumors (PNETs)

Beth Israel Deaconess Medical Center, Boston, MA


*Laura C. Lamb1,2, Kristen Zarfos2, *Bethany Carr2
1University of Connecticut, Avon, CT; 2The Hospital of Central Connecticut, New Britain, CT

P32. Calpain Inhibition Decreases Collagen Formation and Modulates Cytoskeletal Protein Expression in a Swine Model of Chronic Myocardial Ischemia

Brown University, Providence, RI

* NESS Non-Members
P33. Regional Variation in Breast Cancer Surgery: Results from the National Cancer Database (NCDB)
Yale University, New Haven, CT

P34. Clinical and Genomic Characterization of Pleomorphic Invasive Lobular Carcinoma
University of Massachusetts, Worcester, MA

P35. Patient Disposition After Lobectomy for Lung Cancer Predicts Hospital Readmission
Yale School of Medicine, New Haven, CT

P36. Timing of Post-Operative Pneumonia Affects Outcome
*Swathi B. Reddy, Kevin M. Schuster, Kimberly A. Davis
Yale New Haven Hospital, New Haven, CT

P37. Benign Ultrasound-Guided Breast Core Biopsy – Is Excision Necessary?
Tufts Medical Center, Boston, MA

P38. Can an Intestinal Fluid Shift Be a Predictor of Ischemic Injury?
Yale School of Medicine, Yale University, New Haven, CT

P39. Utility of PET-CT in Detecting Occult Malignancy in Sentinel Lymph Node-Positive Melanoma
*Jacqueline Paolino, *Ayal Pierce, Roger Graham
Tufts Medical Center, Boston, MA

* NESS Non-Members
P40. Patterns of Different Classes of Oral Anticoagulants and Antiplatelets Among Elderly Fall Patients at a Level I Trauma Center
1University of Connecticut Health, Farmington, CT; 2Injury Prevention Center, Hartford, CT; 3Hartford Hospital, Department of Trauma Surgery, Hartford, CT

P41. Pre-Hospital CPR is a Risk Factor for Early Death in Patients Transferred to an Adult Burn Center
Alisa Savetamal, Shea Gregg, Roselle Crombie, Walter Cholewczynski, *Kristen Glasgow, Nabil Atweh
Bridgeport Hospital, Bridgeport, CT

P42. Factors Suggesting General Surgery Board Passage: An 11 Year Review
Paul H. Kispert, *Ryland S. Stucke, Kari Rosenkranz
Dartmouth, Lebanon, NH

P43. Bone Mineral Density Measurements As Predictors of Injury Patterns in Elderly Trauma Patients
*Ian Schlieder, *Michael Kelleher, Bishwajit Bhattacharya, Adrian Maung, Kimberly Davis, Kevin Schuster
Yale University, New Haven, CT

P44. Charles Locke Scudder (1860–1949)
David E. Clark
Maine Medical Center, Portland, ME

* NESS Non-Members
Panel – Credentialing Surgeons in the Era of Volume/Outcome Research

Plaza Ballroom AB
10:40 AM – 12:00 PM

Moderator: Richard S. Swanson

Faculty:
- Summary of Current Volume/Outcome Relationships
  John Birkmeyer
  Chief Academic Officer, Dartmouth-Hitchcock Health

- Credentialing for 22 years at a Large Volume Hospital
  Michael J. Zinner
  Former Chairman of Surgery at Brigham & Women’s Hospital

- Credentialing at a Small Volume Hospital
  Scott H. Kurtzman
  Chairman, Department of Surgery, Waterbury Hospital

- Credentialing in Two Different Boston Hospitals
  Gerard Doherty
  Chairman of Surgery at Boston Medical Center & Future Chairman of Surgery of Brigham & Women’s Hospital

- Credentialing at Dartmouth
  John D. Birkmeyer
  Chief Academic Officer, Dartmouth-Hitchcock Health

Panel Question & Answer
12:00 PM    FREE AFTERNOON

6:15 PM    CENTENNIAL VIDEO PREMIERE
            Black Tie Preferred
            Amphitheater (World Trade Center)

7:00 PM    PRESIDENT’S RECEPTION & DINNER
            Black Tie Preferred

            Reception: Harborview Ballroom Foyer
                        (World Trade Center)

            Dinner: Harborview Ballroom
                        (World Trade Center)
SUNDAY, SEPTEMBER 18, 2016

7:00 AM – 11:00 AM  REGISTRATION
Plaza Ballroom Foyer

7:00 AM – 10:00 AM  EXHIBIT HALL HOURS
Plaza Ballroom C

7:00 AM – 10:30 AM  SPEAKER READY ROOM
Plaza Ballroom Foyer

7:00 AM – 8:00 AM  CONTINENTAL BREAKFAST
Plaza Ballroom C

7:30 AM – 8:15 AM  ANNUAL BUSINESS MEETING
(Members Only)
Plaza Ballroom AB


¹Massachusetts General Hospital, Harvard Medical School, Boston, MA; ²Boston Medical Center, Boston, MA; ³Baystate Medical Center, Boston, MA; ⁴Yale School of Medicine, New Haven, CT; ⁵Beth Israel Deaconess Medical Center, Boston, MA; ⁶Brigham and Women’s Hospital, Boston, MA; ⁷UMass Memorial Medical Center, Boston, MA; ⁸Hartford Hospital, Hartford, CT; ⁹North Shore Medical Center, Salem, MA; ¹⁰Tufts Medical Center, Boston, MA

* NESS Non-Members
23. The Surgeon As the Second Victim? Results of the Boston Intraoperative Adverse Events Surgeons; Attitude (BISA) Study
Massachusetts General Hospital, Boston, MA

±24. Safety of Retrievable Inferior Vena Cava Filter Placements in High Risk Bariatric Surgery Patients
1Brown University, Providence, RI; 2Singapore National University, Singapore, Singapore; 3Massachusetts General Hospital, Boston, MA; 4Ochsner Health Center, Kenner, LA

Brief 13. Negative Urine Studies in Conjunction with Negative FAST Predict No Intra-Abdominal Injury in Adult Blunt Trauma Patients
*Maureen V. Hill1, *Karina A. Newhall1, *Priyam K. Vyas2, Kurt K. Rhynhart1, *J. David Mancini1, Eric D. Martin1, Kenneth W. Burchard1
1Dartmouth Hitchcock Medical Center, Lebanon, NH; 2Christiana Care Health System, Wilminton, DE

*John Young, *Travis Geraci, David Harrington, William Cioffi, Thomas Ng
Department of Surgery, Alpert Medical School of Brown University, Providence, RI

Brief 15. Effects of Use of a Self-Directed Question Bank on ABSITE Performance
*Molly J. Douglas, *Jaswin S. Sawhney
Maine Medical Center, Portland, ME

± RPE Eligible Papers
* NESS Non-Members
9:10 AM – 9:55 AM  32ND ANNUAL SAMUEL JASON MIXTER LECTURE
Plaza Ballroom AB
The Century of the System
Atul A. Gawande
Brigham & Women’s Hospital

9:55 AM – 10:00 AM  INTRODUCTION OF PRESIDENT
Plaza Ballroom AB
Richard J. Barth, Jr.

10:00 AM – 11:00 AM  PRESIDENTIAL ADDRESS
Plaza Ballroom AB
Its Been an Honor and Priviledge
Michael J. Zinner

11:00 AM  ADJOURN
FRIDAY, SEPTEMBER 16, 2016

9:00 AM – 5:00 PM  REGISTRATION
Plaza Ballroom Foyer

9:00 AM – 5:00 PM  SPEAKER READY ROOM
Plaza Ballroom Foyer

9:00 AM – 5:00 PM  POSTER SET-UP
Plaza Ballroom C

12:00 PM – 3:00 PM  EXHIBIT HALL HOURS
Plaza Ballroom C
Scientific Session I
1:00 PM – 2:30 PM
Plaza Ballroom AB
Moderator: Michael J. Zinner

Podium papers 8-minute presentation/5-minute discussion.
Brief papers 3-minute presentation/2-minute discussion.

±1. William W.L. Glenn: Surgeon-Scientist, Inventor, and NESS President
   *Andrew C.W. Baldwin, *John C. Baldwin, Walter E. Longo
   Yale School of Medicine, New Haven, CT

Objective: Examine the life of Dr. William Glenn, a prominent member of a pioneering generation of cardiothoracic surgeons, and titan of surgery in New England.

Design: Archival.

Setting: Historical.

Results: Upon completion of his training at Massachusetts General Hospital, Glenn served in World War II—an experience that helped to develop the innovative spirit that would define his career. Glenn would later join the faculty of Yale where he served as chief of cardiovascular surgery until his retirement.

Perhaps best known of his many accomplishments was the formulation of the surgical procedure that would ultimately bear his name—the Glenn shunt—which continues as a mainstay in the treatment of congenital heart disease. In addition to pioneering surgical techniques and authorship of his prominent cardiothoracic textbook, Glenn helped to develop groundbreaking applications for radiofrequency stimulation of the heart and diaphragm, and famously developed an experimental artificial heart model using a child’s Erector Set—now housed in the Smithsonian Institution.
Glenn’s influence on the field of academic surgery is evidenced by the leadership positions he held within a number of prominent medical societies—honors that included being the first surgeon elected president of the American Heart Association, and serving as president of the New England Surgical Society in 1984.

His presidential address during this society’s 65th meeting was dedicated to another of his long-time interests—the life of Benjamin Franklin—chronicling Franklin’s own scientific accomplishments and their influence on the medical field.

**Conclusions:** William Glenn’s legacy within New England and throughout the world continues to influence new generations of surgeons—not only through the ongoing relevance of his contributions, but also by inspiring the use of creative thinking in advanced clinical practice.
Overcoming Barriers to Survival Following Pig-to-Baboon Liver Xenotransplantation


Center for Transplantation Sciences Massachusetts General Hospital/Harvard Medical School, Boston, MA

**Objective:** Assess rejection following pig-to-baboon liver xenotransplantation (LXT).

**Design:** Large animal research.

**Setting:** Laboratory.

**Patients:** Baboon recipients of porcine livers (n = 8).

**Interventions:** Human prothrombin concentrate complex (Octaplex), Human Recombinant Factor 7a (Novoseven).

**Main Outcome Measures:** *In-vitro* and immunohistological detection of rejection.

**Results:** Following LXT, baboons received continuous Novoseven (n = 3) or Octaplex as a bolus (n = 2) or as a continuous infusion (n = 3). Immunosuppression consisted of an induction dose of thymoglobulin, maintenance therapy with continuous FK506, and a methylprednisone taper. In addition, two baboons received co-stimulation blockade (belatacept). All recipients underwent serum assessment for circulating baboon anti-pig immunoglobulins (IgM and IgG) via fluorescence-activated cell sorting (FACS) analysis. The presence of circulating IgM was detected in only one recipient on post-operative (POD) 7, with subsequent resolution by POD 14. This correlated clinically with an increase in liver function tests consistent with rejection and resolved following treatment with pulse-dose corticosteroids. On further analysis these antibodies were confirmed to be circulating cytotoxic IgM. No baboons demonstrated the presence of antibody deposition on immunohistochemistry staining of liver biopsies. Furthermore, all recipients of continuous coagulation factor administration demonstrated normal hepatic architecture, minimal inflammation, no evidence of cellular rejection, and an absence of thrombotic microangiopathy.

* NESS Non-Members
Conclusions: Our findings suggest that the immunological hurdles to xenotransplantation are surmountable as conventional immunosuppressive protocols are capable of maintaining liver xenograft survival up to 25 days without the development of rejection. Graft failure appears to be an end result of coagulopathy, thrombocytopenia and cholestasis attributed to interspecies incompatibilities. Further work in overcoming these barriers is underway in an effort to potentially allow pig-to-baboon LXT to serve as a bridge to allotransplantation in patients with acute hepatic failure.
The Benefits of a Surgical Rotation in an International Setting
*Molly J. Douglas*, Michael Curci
*Maine Medical Center, Portland, ME*

**Objective:** Provide a surgical residency immersion rotation in an international, resource-limited environment.

**Design:** Western medicine’s involvement in low and middle income countries (LMICs) has historically included short term visits delivering “bursts” of needed care, while some longer duration exchange programs have sought a more integrated contribution to the healthcare system. To better understand these issues, a 4-week immersion rotation was created for a US-based 3rd year surgical resident on a pediatric surgery service alongside Rwandan faculty and residents including night call.

**Setting:** Rwanda’s University Teaching Hospital of Kigali, the main referral hospital for the nation’s public health system. Significant institutional resource constraints included limited staffing, limited ICU capacity, and variable availability of antibiotics, suture material, radiologic and laboratory studies.

**Interventions:** A 3rd year general surgical resident, mentored by a US board certified surgeon, rotating for 4 weeks in Kigali, Rwanda.

**Main Outcome Measures:** Comparisons of case diversity, proportion of time spent on non-clinical tasks, and cultural and educational observations of the resident.

**Results:** The case mix in Rwanda was more diverse. Less time was spent on “indirect care” including documentation and chart review; a paper record system encouraged economy of words. Cultural observations included a Rwandan emphasis on operative independence earlier in training and less emphasis on precise perioperative care. Environmental austerity coupled with a language barrier also improved reliance on physical exam and honed the ability to make decisions with limited information.

**Conclusions:** An international immersion rotation increases understanding of LMICs health systems, provides a unique surgical education pertinent to the ACGME’s six competencies, and may foster an ongoing interest in global health.
#4. The Well-Being of Surgical Trainees in New England


Yale School of Medicine, New Haven, CT

Objective: To assess the current state of well-being of surgical trainees in New England.

Design: Cross sectional qualitative self-reported survey to assess the domains of personal health, finances, and management of stress and fatigue.


Participants: Surgical Trainees.

Main Outcome Measures: Qualitative data regarding well-being of surgical residents.

Results: 163 respondents completed the survey. 90% of respondents identified their programs as “university or academic.” Substantial cohorts of respondents reported that during training, they experienced inadequate exercise (69%), adverse weight gain (43%), lack of appropriate primary medical care (57%) and routine health maintenance (55%), lack of appropriate dental care (59%) and vision care (20%). While most respondents found their stipend to be adequate (68%), 25% endorsed worrying about their finances. 20% had personal credit card debt >$5K, and 86% had student loans; 43% of respondents reported total educational debt of >$200K. The average respondent had an Epworth sleepiness score of 14, which is consistent with pathologic daytime sleepiness as seen in moderate sleep apnea. Most residents enjoyed coming to work each day (74%), considered their co-residents their friends (90%), however, the vast majority reported that work-related stress was either moderate (76%) or severe/extreme (16%). Most also reported that work-related stress negatively affected their overall well-being (69%), while substantial cohorts lacked strategies to reduce stress while at work, and reported major stressors outside the workplace.

Conclusions: The well-being of surgical trainees is critical to optimal patient care, career development, and burnout reduction. Surgical residents attend to their own preventive health maintenance, finances, sleep, and stress reduction with variable success. Areas for improvement are identified.

# New Member Prize Eligible
* NESS Non-Members
Using High-Reliability Organization Principles to Improve Communication During High-Fidelity Trauma Simulation


Bridgeport Hospital, Yale–New Haven Health System, Bridgeport, CT

Objective: To incorporate High-Reliability Organization (HRO) principles into a trauma simulation curriculum and measure their impact on resident leader communication.

Design: Before-after trial.

Setting: General Surgery training site; Level II trauma center.

Participants: General surgery residents serving as team leader for trauma simulations.

Interventions: A previously-established, team leadership evaluation tool used in actual trauma resuscitations was used in high-fidelity trauma simulations. This tool listed thirty actions demonstrating the ACGME core competencies of patient care, medical knowledge, communication/professionalism, practice-based learning, and systems-based practice. These actions were graded on a Likert scale of 1 (poor) to 5 (exceptional). Following system-wide education in HRO principles, the following were included in the simulation curriculum: CHAMP (Communicate clearly/Check backs; Hand-off effectively; Attention to detail; Mentoring with accountability; Practice and accept questioning attitude); Closed-loop communication; Using “Stop the Line” for safety concerns. Phase 1 of the monthly simulation curriculum provided evaluation tool feedback on communication performance (4/2014–12/2014). The HRO principles were incorporated in Phase 2 (8/2015–3/2016). This study was IRB review exempt.

Main Outcome Measure: Communication/professionalism scores were evaluated to quantify the impact of HRO training on the simulation curriculum.
Results: During the study period, 13 resident team leaders were evaluated, seven in Phase 1, and six in Phase 2. Average aggregate communication/professionalism scores were significantly improved (2.5 vs. 3.8, p = 0.003). Significant score improvement was noted in role assignment, check back verification, effective decision communication, team member engagement in decisions, and respectful communications (p ≤ 0.05). No significant score changes were observed in team leader establishment, situational awareness update inquiries, quick/firm decision communication, error recognition/correction, and constructive conflict resolution (p ≥ 0.05).

Conclusion: Structured, HRO training can improve communication/professionalism scores on a resident team leadership evaluation tool used in high-fidelity trauma simulation.
**Objective:** Despite extensive experience with pancreaticoduodenectomy (PD) postoperative pancreatic fistula (POPF) is common (>40% of soft-pancreas cases). We designed a novel approach.

**Design:** Retrospective.

**Setting:** High-pancreas-volume community-teaching hospital.

**Patients:** Fifty consecutive pancreatic head resections.

**Interventions:** Reasoning that leaks occur not only from the main pancreatic duct, but also from small ductules on the cut surface of the pancreas, that anastomotic corners are especially susceptible areas for leaking, and that two hermetic layers are optimal, we combined a compressive U-stitch invagination, a novel technique to bury the corners with the “curls” of the “Colonial Wig” (Figure), and finally hermetically sutured the outer layer. Patients having complications precluding assessment of POPF (e.g., early postoperative mortality) were excluded.

**Results:** Of 50 consecutive pancreatic-head resections, 48 were PDs. Comorbidities existed in 96% of patients (median 5/patient). The morbidity rate was 49% (27% Clavien grade >2). The median length of stay was 11 days. In the first 26 PDs, the pancreaticojejunostomy (PJ) was performed with a duct-to-mucosa technique and the clinically relevant POPF (CR-POPF) rate was 15%. In the next 22 PJs, the “Colonial Wig” anastomosis was employed (Figure), with a CR-POPF rate 0% (P = 0.066) among eligible cases. These groups had similar Fistula Risk Score (P = 0.35). The observed CR-POPF rate of 0% was significantly lower than the predicted rate of 13% (P = 0.049).

* NESS Non-Members
Conclusions: High-volume pancreatic surgery is possible at a teaching community hospital, and morbidity is comparable with the literature. Our novel “Colonial Wig” anastomosis is an effective way to avoid POPF.
Objective: To evaluate the incidence of vital sign aberrations following laparoscopic bowel resection as compared with open bowel resection. We hypothesize that deviations in vital signs are less common and return to normal more quickly after laparoscopic surgery.

Design: Retrospective case series of a prospectively maintained complication database. Data set generated by querying our electronic medical record (EPIC), and analyzed using commercially available statistical software (STATA).

Setting: Tertiary-care academic medical center in Burlington, VT.

Patients: 1,059 consecutive patients undergoing elective bowel resection with anastomosis from July 2009 to June 2014. Subjects were matched by age, gender, procedure code, tobacco abuse, diabetes, and cardiovascular disease.

Main Outcome Measures: Vital signs and laboratory values (temperature, heart rate, respiratory rate, systolic blood pressure, and white blood cell count) on each post-operative day. A total of 170,642 vital signs and 4,868 WBC counts were measured and analyzed.

Results: Of the total 1,059 patients who underwent bowel resection during the study period: 777 open cases (73.4%) and 282 laparoscopic cases (26.6%). Average vital signs and WBC counts were significantly lower after laparoscopic cases compared to open cases. All variables differed on post-operative day 1; temperature (p < .0001), heart rate (p < .0001), respirations (p < .0001), systolic blood pressure (p < .00817), and WBC count (p < .0001). By post-operative day 3, only heart rate differed amongst the groups (p < .0001), and by post-operative day 4, no significant differences remained.
Conclusions: Vital signs return to normal more quickly following laparoscopic procedures than after open procedures. Open surgery is more disruptive to baseline physiology, however, by post-operative day 3, physiologic differences between laparoscopic and open cases have largely resolved.
Brief 3. Sacral Nerve Modulation for Fecal Incontinence; Five-Year Experience

*Anne C. Granfield, Steven Schechter, *Leslie Roth, Adam Klipfel
Brown University, Providence, RI

**Objective:** To evaluate the effectiveness of sacral nerve modulation for relief of fecal incontinence.

**Design:** Retrospective review.

**Setting:** Specialty ambulatory referral center for colorectal diseases.

**Patients:** Patients seen in the office for fecal incontinence who elected to have sacral nerve modulation between 2011–2015.

**Interventions:** Sacral nerve modulation placement. Neuromodulators were placed after initial nerve testing showed positive results. Patients were seen for at least 3–6 month follow-up after the study began.

**Main Outcome Measure:** Cleveland Clinic Fecal Incontinence score. A secondary measure was patient satisfaction.

**Results:** There were a total of 46 sacral nerve insertions between 2011–2015. There were 5/46 stimulators removed for nonfunction and/or need for MRI. There were 31/46 patients who continued to follow-up in the office for sacral nerve modulation. The CCFI scores were analyzed using a paired t test to ascertain whether there was a significant difference in incontinence scores after sacral nerve modulation. Preoperative average score was 14.7 and postoperative was 5.2. The mean average decrease in CCFI scores was 9.93 (±5.58 with p < 0.000115) after the sacral nerve modulation. Also 28/31 (90%) had a decrease in CCFI score; 21/31 (68%) had a decrease in >50%. There was no correlation in patients with pudendal neuropathy towards a larger decrease in CCFI score (p < 0.12). There was also no correlation in decreased CCFI score in patients who had a sphincter defect (p < 0.23). The infection rate was 1/31 (3.2%).

**Conclusions:** Sacral nerve modulation is a safe and minimally invasive treatment option for patients with fecal incontinence with acceptable morbidity. This study shows a statistically significant decrease in fecal incontinence scores after sacral nerve modulation.

* NESS Non-Members
Objective: Immunotherapy with adoptive cell transfer (ACT) and Ipilimumab can mediate complete and durable responses, as well as partial responses and prolonged disease stabilization. Unfortunately, many patients ultimately develop progressive melanoma. For these patients, metastasectomy can be considered if tumor progression is limited. Here we report our experience using surgery to treat progressive melanoma in patients who had evidence of an anti-tumor immune response to ACT or Ipilimumab.

Design: Case series of patients treated with metastasectomy for progressive melanoma after a response to immunotherapy.

Setting: Single institution (Surgery Branch, NCI).

Patients: Individuals with advanced melanoma treated with ACT or Ipilimumab, who had an objective response or stable disease for 6 months (SD6) before developing progressive disease.

Interventions: Surgical metastasectomy for progressive melanoma.

Main Outcome Measures: Progression free survival (PFS) and overall survival (OS) following surgery.

Results: After ACT, 115 patients met response criteria before developing progressive disease, and 26 (23%) had surgery. Median follow-up after surgery was 62 months. Median PFS after surgery was 11 months and five-year OS was 57%. After Ipilimumab, 32 patients met response criteria and progressed, and 6 (19%) had surgery. Median follow-up after surgery was 106 months. PFS and OS after surgery were 50%.

Conclusions: Prolonged PFS can be achieved by metastasectomy in selected patients with progressive melanoma following treatment with ACT or Ipilimumab. Metastasectomy may play an important role in treating advanced melanoma following effective immunotherapy.
Brief 5. Efficacy of C-Reactive Protein Measurement in Predicting Postoperative Morbidity and Pancreatic Fistula Following Pancreatoduodenectomy


*Yale University, New Haven, CT

Objective: Enormous improvement in mortality following pancreatoduodenectomy (PD) has not been accompanied by a corresponding improvement in postoperative morbidity. In particular, incidence of postoperative pancreatic fistula (POPF) remains high. C-reactive protein (CRP) has been investigated as a surrogate marker for anastomotic leakage following gastrointestinal surgery. This study sought to examine the utility of CRP in predicting POPF and morbidity following PD.

Design: Prospective case series.

Setting: Academic tertiary center.

Patients: 139 consecutive patients undergoing PD from 1/2013 to 12/2015.

Intervention: Serum CRP was assessed daily in patients undergoing PD during their primary admission.

Outcome Measures: The primary outcome assessed was POPF as defined by international consensus. Secondary outcomes included overall morbidity as assessed by Clavien-Dindo classification and other events of interest. Complications were correlated with CRP levels and statistical analysis was performed.

Results: Mean CRP increased from 63 on postoperative day (POD) #1 to 205 on POD#3 among all patients. POPF occurred in 17 patients (12.2%); mean CRP was equivalent to non-POPF patients on POD#1 but increased to 271 ± 46 versus 196 ± 66 in non-POPF patients by POD#2 (p < 0.001) and remained significantly elevated through POD#6. Incidence of POPF with CRP > 250 for ≥3 days was 55% (relative risk 26.9, C.I. 7.9–91.7) versus 6.7% with CRP < 180 (relative risk 0.26, C.I. 0.003–0.209). 0% of patients with CRP < 170 for ≥3 days experienced POPF. Similar correlations with CRP were observed for major (Clavien ≥ 3) complications. Among assessed patients requiring readmission, CRP > 130 strongly correlated with POPF or abscess formation (p < 0.001).

* NESS Non-Members
Conclusions: Elevated levels of CRP in patients undergoing PD demonstrate significant correlation with incidence of POPF and other major complications. This may enable early identification of morbidity and facilitate earlier discharge in appropriate patients.

2:30 PM – 3:00 PM COFFEE BREAK: VISIT EXHIBITS & POSTERS
Plaza Ballroom C
Scientific Session II
3:00 PM – 5:00 PM
Plaza Ballroom AB
Moderator: Kari Rosenkranz

Podium papers 8-minute presentation/5-minute discussion.

Brief papers 3-minute presentation/2-minute discussion.

±6. SLC12A7 Amplifications Promote Adrenocortical Cancer Cell Invasiveness
Yale University School of Medicine, Department of Surgery, New Haven, CT

Objective: Solute Carrier Family 12 Member 7 (SLC12A7) promotes tumor metastasis and its amplification portends a poor prognosis in cancer. SLC12A7 amplifications were recently discovered in adrenocortical carcinoma (ACC) tumors. This study determines the *in vitro* effects of upregulated SLC12A7 expression on ACC tumor cell line SW-13.

Design: Basic science.

Setting: Laboratory.

Patients: None.

Interventions: Gene expression analysis demonstrated normal SLC12A7 expression levels in SW-13 cells. SW-13 cells were stably transfected with pCMV6-Entry/SLC12A7 expression vector (SW-13/S) to determine the effects of enforced overexpression of SLC12A7. SW-13 cells stably transfected with empty pCMV6-Entry vector and parental cells served as controls. *In vitro* studies tested the outcomes of SLC12A7 overexpression on malignant characteristics, including cell viability, growth, potential for clonogenic growth, motility, invasion, and cell adhesion and detachment kinetics. Microscopic analysis assessed morphological

± RPE Eligible Papers
* NESS Non-Members
changes imparted by SLC12A7 overexpression. Transcription factor gene expression array analysis was performed to identify potential downstream mediators of SLC12A7 overexpression.

**Main Outcome Measures:** Cell viability, growth, clonogenic growth, migration, invasion, adhesion and detachment kinetics, morphological changes, and transcription factor expression alterations.

**Results:** SLC12A7 overexpression did not influence cell viability, growth, or clonogenic growth potential. Enforced SLC12A7 overexpression, however, robustly promoted motility and invasion characteristics (p < 0.05). SW-13/S cells also showed significantly increased cell attachment and detachment turnover (p < 0.05), potentially propelled by increased filopodia formation. Differential transcription factor expression analysis identified *Inhibitor of DNA Binding 1 (ID1)* as a potential modulator of SLC12A7 induced malignant activity.

**Conclusions:** Amplification of SLC12A7 observed in adrenocortical carcinoma is shown here *in vitro* to exacerbate the malignant behavior of ACC cells, possibly mediated in part by *ID1*. These findings suggest SLC12A7 as a potential therapeutic target in ACC.
Relationship of Breast MRI to Recurrence Rates in Patients Undergoing Breast-Conservation Treatment

*Maureen V. Hill¹, *Julia L. Beeman¹, *Khushboo N. Jhala², Richard J. Barth, Jr.¹

¹Dartmouth Hitchcock Medical Center, Lebanon, NH; ²Geisel School of Medicine, Hanover, NH

Objective: The effect of pre-operative MRI on the in-breast recurrence rate of patients undergoing breast-conservation treatment (BCT) remains uncertain. In most studies, MRI is not done on a routine basis and is only performed on high risk patients. At our institution, we began to routinely perform pre-operative MRI for operative planning in 2006. Our goal was to determine the effect of pre-operative MRI on the in-breast recurrence rate.

Design: Review of retrospective database.

Setting: Academic medical center.


Intervention: None.

Main Outcome Measure: In-breast recurrence using Kaplan-Meier estimates.

Results: 664 (47.6%) patients underwent pre-operative MRI. The use of MRI increased from 13.9% in 2000–2005 to 80.7% in 2006–2010. 9.9% of patients who underwent pre-operative MRI were found to have an additional ipsilateral cancerous lesion. The in-breast recurrence rates for patients with and without pre-operative MRI were 3.7% vs. 5.3% at 5 years and 4.0% vs. 8.0% at 8 years (p = 0.04). For DCIS patients with and without MRI the recurrence rates were 1.8% vs. 7% at 5 years and 3.6% vs. 10.9% at 8 years (p = 0.06). For patients with invasive cancer the recurrence rates were 4.2% vs. 4.5% at 5 years and 4.2% vs. 7.3% at 8 years (p = 0.28). In the subgroup of DCIS patients who did not receive radiation, the 5 year recurrence rate was 0% with MRI vs. 18.2% without MRI (p = 0.08).

Conclusion: In a study analyzing BCT patients from one time period who rarely had pre-operative MRI and a subsequent time period where most patients had MRI, the use of MRI was associated with a decrease in the in-breast recurrence rate.
8. Prevalence of Contralateral Tumors in Patients with Follicular Variant of Papillary Thyroid Cancer


1Brigham and Women’s Hospital, Boston, MA; 2MD Anderson Cancer Center, Houston, TX

Objective: Growing evidence suggests that follicular variant of papillary thyroid cancer (fvPTC) represents a heterogeneous population of cancers ranging from indolent tumors to those with aggressive malignant potential. We sought to define the incidence of multifocal disease in fvPTC to improve decision making regarding the extent of surgical resection.

Design: Retrospective case series.

Setting: A single, urban, tertiary care center.

Patients: All patients who underwent thyroid surgery between October 2009 and February 2013 with final pathology demonstrating fvPTC as their primary lesion.

Main Outcome Measures: We collected information regarding patient demographics, nodule size, multifocality, fine needle aspiration (FNA) results, and histopathologic features including lymphovascular invasion (LVI), capsular invasion, extrathyroidal extension, and lymph node metastasis. Tumors were divided into noninvasive and invasive fvPTC categories. Characteristics of solitary and bilateral fvPTC were compared.

Results: We identified 124 patients with final pathology demonstrating fvPTC. The most common FNA diagnosis was “suspicious for malignancy” (n = 53), followed by “malignant” (n = 20), and “atypia/follicular lesion of undetermined significance” (n = 19). Sixty-five contralateral tumors were identified in 44 patients (35.5%) and included fvPTC (n = 40), classical PTC (n = 22), tall cell PTC (n = 2), and follicular cancer (n = 1). Patients with contralateral disease were more likely to have LVI (p = 0.037) and larger primary lesions (p = 0.020). There was no significant difference noted in extrathyroidal extension, invasive histology, or lymph node metastasis. Both noninvasive and invasive fvPTC demonstrated similar rates of contralateral disease.

* NESS Non-Members
**Conclusions:** Bilateral disease is prevalent in noninvasive and invasive fvPTC. Larger tumor size and LVI correlate significantly with the presence of contralateral tumors. Completion thyroidectomy should be considered for patients with fvPTC and careful monitoring of the contralateral lobe performed for the development of potentially malignant nodules.
Vascular Endothelial Growth Factor Accelerates Compensatory Lung Growth by Increasing Alveolar Units


Boston Children’s Hospital, Boston, MA

Objectives: We have previously shown that exogenous administration of vascular endothelial growth factor (VEGF) accelerates compensatory lung growth in mice after unilateral pneumonectomy. In this study, we seek to determine how VEGF alters pulmonary mechanical properties and architecture of the regenerating lung.

Design: Eight-to-ten week-old C57Bl/6 male mice underwent left pneumonectomy, followed by daily intraperitoneal injection of saline or VEGF at a dose of 0.5 mg/kg. Pulmonary mechanical properties were measured on post-operative day (POD) 4 or 10, immediately before euthanasia. Lung volume was determined by a volume displacement method and morphometric studies were performed utilizing a point-counting technique. All volume and surface area measurements were normalized against body weight.

Setting: Laboratory.

Patients (or Other Participants): Mice.

Interventions: VEGF.

Main Outcome Measure(s): Lung volume, pulmonary mechanical properties, and morphometric analyses.

Results: Lung volume to body weight ratio on POD 4 is significantly higher in the VEGF-treated mice compared to the saline group (0.059 ± 0.005 vs. 0.052 ± 0.008 mL/g, p = 0.02, n = 13). Area under the pressure-volume loop, which corresponds to the number of alveolar units, was significantly increased by VEGF treatment on POD 4 (0.124 ± 0.028 vs. 0.097 ± 0.033 cmH2O.mL/g, p = 0.04, n = 12). On morphometric analyses, VEGF significantly increased parenchymal volume (0.047 ± 0.003 vs. 0.038 ± 0.005 mL/g, p < 0.01, n = 5), alveolar volume (0.030 ± 0.001 vs. 0.023 ± 0.003 mL/g, p < 0.01, n = 5), and septal surface area (19.0 ± 1.4 vs. 15.4 ± 1.8 cm²/g, p < 0.01, n = 5) on POD 4. Additionally, the alveolar to parenchymal volume ratio was similar in both groups, indicating preserved pulmonary architecture with VEGF treatment.
**Conclusions:** VEGF accelerates compensatory lung growth by increasing alveolar units without altering pulmonary mechanics or architecture. These findings highlight the potential of VEGF as a novel therapy in the treatment of severe pulmonary hypoplasia.
Wide Variation and Excessive Dosage of Narcotic Prescriptions for Common General Surgical Procedures

*Maureen V. Hill¹, *Michelle L. McMahon², *Ryland S. Stucke¹, Rick J. Barth, Jr.¹

¹Dartmouth Hitchcock Medical Center, Lebanon, NH; ²Geisel School of Medicine, Hanover, NH

Objective: With narcotic abuse rising, it behooves surgeons to limit the number of narcotics prescribed post-operatively. However, the imperative to give patients enough narcotics so they don’t need to return for a refill drives surgeons to prescribe an abundance of pills. Our objective was to evaluate current prescribing practices.

Design: Chart review and phone survey.

Setting: Academic medical center.

Patients: We evaluated 642 patients undergoing 5 outpatient procedures: open inguinal hernia repair (IH), laparoscopic inguinal hernia repair (LIH), partial mastectomy (PM), partial mastectomy with sentinel lymph node biopsy (PM SLNB), and laparoscopic cholecystectomy (LC).

Interventions: N/A.

Main Outcome Measures: Post-operative narcotic prescriptions and refill data. A phone survey was conducted to estimate the number of pills taken.

Results: There was a wide variation in the number of narcotic pills prescribed to patients. For example, the median number of narcotics prescribed for LC was 30, range 0–100, 35% prescribed ≥40 pills. For PM and PMSLN patients, the median was 20, 21% received none and 25% received ≥30 pills.

Overall, only 27% of prescribed pills were taken. This percentage varied by operation: IH 55%, LIH 27%, LC 27%, PMSLN 21% and PM 7%.
We identified the number of pills that would fully supply the narcotic needs of 80% of patients undergoing each operation: IH 30, LIH 15, LC 15, PMSLN 10 and PM 0. If this number were prescribed, the number of narcotics initially prescribed would decrease by 55%.

**Conclusions:** There is wide variability in narcotic prescriptions for common general surgery procedures. In many cases excess pills are prescribed. It may be possible to decrease the number of narcotics prescribed with minimal effects on patient convenience.
11. Parathyroidectomy After Kidney Transplant Is Associated with Increased Graft Failure
Yale University School of Medicine, New Haven, CT

Objective: To assess the effect of parathyroidectomy timing on kidney transplant (KTX) graft function in patients with uremic hyperparathyroidism (UHPT). It is known that the degree of parathyroid hormone (PTH) elevation prior to KTX is a risk factor for graft failure and predicts eventual development of tertiary HPT. However, the risk of graft failure in patients undergoing parathyroidectomy before KTX has not been compared with that of patients undergoing parathyroidectomy after KTX.

Design: Retrospective cohort study.

Setting: Tertiary care academic center.


Interventions: Pre-KTX parathyroidectomy; post-KTX parathyroidectomy.

Main Outcome Measures: Graft failure.

Results: 913 patients underwent KTX from 2005–2014. Median age was 53 (range 18–83) years. Most patients were white (59.4%) and male (65.2%). Graft survival 1 year post-KTX was 97.8%. Overall, 462 (50.6%) patients had a pre-KTX diagnosis of UHPT. Of these, 57 (12.3%) underwent parathyroidectomy at median 2.2 (range 0.1–25.1) years pre-KTX, and 18 (3.9%) patients underwent parathyroidectomy at median 2 (range 0.2–7.8) years post-KTX for tertiary HPT. Overall graft failure in patients who underwent post-KTX parathyroidectomy was significantly higher than in patients who never underwent parathyroidectomy or who underwent parathyroidectomy pre-KTX (39% vs 7% vs 13%; p = 0.0003, p = 0.0341, respectively). Graft failure was not statistically different between patients who never underwent parathyroidectomy versus patients who underwent pre-KTX parathyroidectomy (p = NS).

Conclusions: Patients who undergo parathyroidectomy after KTX appear to be at increased risk of graft failure. The timing of parathyroidectomy appears to be an important factor in graft survival after KTX. Consideration of parathyroidectomy prior to KTX to reduce PTH levels and prevent development of tertiary HPT may lead to improved graft survival in this patient population.

* NESS Non-Members
Objective: An elevated odds ratio for postoperative venous thromboembolism (VTE) prompted the development of a standardized, mandatory risk assessment and risk-based prophylaxis protocol. This study evaluates the safety of this chemoprophylaxis program, including extended courses after discharge, in thyroid and parathyroid surgery.

Design: Retrospective case series review.

Setting: Academic, tertiary referral center.

Patients: All General Surgery patients undergoing thyroid or parathyroid operations after the implementation of the Caprini VTE assessment and prophylaxis protocol.

Main Outcome Measures: VTE and bleeding complications, risk score, and chemoprophylaxis compliance.

Results: Of 978 consecutive patients, 72% were determined to be at low to moderate-risk for VTE (Caprini score 0–4), 26% were high-risk (Caprini 5–8), and 2% were highest-risk (Caprini ≥9). Only 27% of eligible high/highest-risk patients actually received extended prophylaxis after discharge. Fifteen patients (1.5%) developed wound hematomas that required evacuations, twelve of them within 24 hours of the index operation. Among patients who developed bleeding complications, five (33%) had Caprini scores indicating low to moderate-risk for VTE, and ten (67%) were in the high/highest-risk categories. Only one patient (of 70 who received extended prophylaxis) developed a delayed (5 days later) hematoma that required a return to the hospital for evacuation; this event was associated with an EMR systems error that resulted in an incorrectly doubled dosage. No patient developed a VTE complication.

Conclusions: Although the incidence of VTE is quite low for patients undergoing thyroid and parathyroid operations, the Caprini standardized risk-based prophylaxis protocol identifies a subset of high-risk patients who may benefit from extended VTE prophylaxis without added harm. Conversely, Caprini scores might also select low-risk patients who require no chemoprophylaxis, possibly reducing risks of hemorrhage.
13. The Role of Computed Tomography in the Diagnosis of Necrotizing Soft Tissue Infections


Massachusetts General Hospital, Boston, MA

Objective: To explore the value of IV contrast-enhanced computed tomography (CT) for the diagnosis of necrotizing soft tissue infections (NSTI).

Design: Retrospective cohort study.

Setting: Academic tertiary medical center.

Patients: Admissions between 2009 and 2015 who received a CT to rule out NSTI. CT was considered positive for NSTI if: a) gas was identified in the soft tissues, b) multiple fluid collections were found (as opposed to a single collection, which was more consistent with pyomyositis), c) tissues were not enhanced by IV contrast, indicating necrosis, d) significant inflammatory changes were noted under the fascia. NSTI was defined positive by the presence of necrotic soft tissue during surgical exploration. NSTI was considered absent if surgical exploration failed to identify necrosis or if the patient was successfully treated without surgical exploration.

Main Outcome Measures: The outcome measure was Sensitivity and specificity of CT for diagnosing NSTI.

Results: Of the 195 patients, 14 had a positive CT result and thereby underwent surgical exploration with NSTI confirmed in 10 (71%) patients. Of the 181 patients that had a negative CT result, 36 (20%) underwent surgical exploration owing to high clinical suspicion for NSTI and all were found to have non-necrotizing infections, while the remaining 145 (80%) were managed non-operatively with successful resolution of their symptoms. The sensitivity of CT to identify NSTI was 100%, the specificity was 96%, the positive predictive value was 57%, and the negative predictive value was 100%.

Conclusions: IV contrast-enhanced CT can reliably rule out NSTI. In the presence of a negative CT, the patient can safely be managed non-operatively under the assumption that there are no necrotizing elements in the infected soft tissues.

* NESS Non-Members
Brief 6. For the Treatment of Primary Hyperparathyroidism Routine Four Gland Exploration Performed on an Outpatient Basis Is As Successful and Safe As a Less Invasive Approach *Marcoandrea Giorgi, *Seungjun Kim, Peter J. Mazzaglia
Brown University, Providence, RI

**Objective:** To examine the safety and efficacy of four gland exploration in parathyroid surgery on an outpatient basis.

**Design:** Retrospective cohort.

**Setting:** Tertiary referral center.

**Patients:** All patients undergoing parathyroidectomy for primary hyperparathyroidism from January 2015 to March 2016 were included.

**Interventions:** All patients underwent 4 gland exploration and parathyroidectomy by single surgeon on outpatient basis.

**Main Outcome Measures:** Operative success was based on intra-operative PTH levels, calcium and PTH measurements on post-op day 1 and at 2 weeks.

**Results:** There were 26 men and 90 women. Mean age was 58.5. Mean pre-op calcium was 11, pre-op PTH was 130. Pre-operative surgeon-performed ultrasound showed a single gland in 88.9%, double adenoma in 6%, multi-gland hyperplasia in 1.7% and was negative in 3.4% of cases. In surgery 67.3% had a single adenoma, 19.8% double adenoma, and 12.9% multi-gland hyperplasia. 64.6% were discharged home the same day. 41 patients were hospitalized because of: excision of ≥3 glands (16), re-exploration performed the same day when final PTH level didn’t drop appropriately (3), need for concurrent total thyroidectomy (4), social factors (17). One patient required re-intubation and ICU admission for airway edema. There were no post-operative hematomas, wound infections, or recurrent laryngeal nerve injuries. Mean 24 hour post-op calcium was 9.4, the rate of transient hypocalcemia was 5%. One patient has persistent hypocalcemia. There were no readmissions. Mean 2 week post-op Ca was 9.4. Based on the two week follow-up calcium and PTH, operative success is 100%.

**Conclusions:** Routine four gland exploration remains a highly successful approach for the treatment of primary hyperparathyroidism. It can safely be performed on an outpatient basis when performed by an experienced surgeon.

* NESS Non-Members
Brief 7. Resident and Fellow Participation in Thyroid and Parathyroid Surgery: An American College of Surgeons NSQIP Clinical Outcomes Analysis

Tufts Medical Center, Boston, MA

Objective: We aimed to identify potential differences in patient outcomes in thyroid and parathyroid surgeries performed with surgical trainees at different levels of training.

Design: This study is a retrospective database analysis using the ACS National Surgical Quality Improvement Project (NSQIP) database. Results spanning from 2005 through 2013 were examined. The top three most frequent thyroid and parathyroid CPT codes were evaluated: parathyroidectomy (60500), thyroidectomy (60240), and thyroid lobectomy (60220). Odds-ratios were calculated comparing the complication rates between attending-only cases and cases involving trainees. Power calculations were performed and there is >99% power to detect a primary outcome difference of >1%.

Setting: The study included cases from the NSQIP database, which is an aggregate of data from participating facilities including academic, non academic, community and tertiary centers.

Patients: All patients included in this study were de-identified and the data acquired from the NSQIP database. The records of 84,770 cases were selected based on CPT code.

Interventions: No interventions.

Main Outcome Measures: Primary outcome measure was overall postsurgical complication rate in attending-only versus attending plus trainee groups.

Results: Odds ratios and 95% CIs for overall complications were calculated with the attending-only cases without a surgical trainee as the reference. In cases that included a junior trainee (PGY1-2) the OR was 1.00 (0.81, 1.23), p = 0.99; for cases that included a senior trainee (PGY3-5) the OR was 0.97 (0.86, 1.09), p = 0.64; and for cases that included a fellow the OR was 0.96 (0.72, 1.27), p = 0.67.

Conclusions: Trainee involvement in frequently performed thyroid and parathyroid surgeries is not significantly associated with an increase in complications. Additionally, we found nothing to suggest level of trainee affected overall complications.

* NESS Non-Members


1Southcoast Health, Alpert Medical School of Brown University, North Dartmouth, MA; 2Southcoast Health, North Dartmouth, MA; 3Harvard University, Cambridge, MA; 4Yale University, New Haven, CT

Objective: Epidemiology, staging and therapy utilization in patients with squamous cell carcinoma of the anus (SCCA).

Design: Case series.

Setting: National Cancer Data Base—American College of Surgeons’ Commission on Cancer.

Patients: Patients treated for SCCA in 109 cancer centers in New England (NE, n = 2,392) and in 1513 cancer centers in the United States (US, n = 40,817) between 2003 and 2013.

Main Outcome Measures: Incidence, age, gender, distance traveled, stage, utilization of surgery, chemotherapy, and radiotherapy as first course treatment (FCT).

Results: Over the 11-year period, incidence increased by 81% in NE and 76% in US. Age, gender and stage distribution were similar between NE and US. Stage unknown was 9.4% in NE and 11.8% in US, higher than common cancers, e.g. colon (7.8%), breast (4.3%) or prostate (6%) (p < 0.001). Patients in southern NE (SNE), compared with northern NE (NNE), traveled <10 miles more often (53.8% vs 38.1%) and >25 miles less often (14.1% vs 28.7%) (p < 0.001). Proportion of early stage cases (0, I) was greater in SNE (29.3%) than NNE (21.7%) (p < 0.001). Surgery alone as FCT rates were similar for stage 0 (NE = 77.1%, US = 74.9%), and for stage I (NE = 27.4%, US = 24.4%). Surgery as FCT, alone or with chemotherapy and/or radiation, for all stages, was also similar in NE (39.5%) and US (38.9%).

* NESS Non-Members
Conclusions: The incidence of SCCA is steadily increasing. Its staging has a high incidence of “unknown”. Travel distance and stage at diagnosis data may reflect regional differences in cancer center care access. The surgeon’s role needs to evolve for quality improvement.
5:00 PM – 5:45 PM  STATE CAUCUS MEETINGS
Connecticut – Seaport B
Maine – Seaport A
Massachusetts – Plaza Ballroom AB
New Hampshire – Seaport C
Rhode Island – Constitution
Vermont – Flagship A

6:00 PM – 7:00 PM  WELCOME RECEPTION
Lighthouse Ballroom
SATURDAY, SEPTEMBER 17, 2016

7:00 AM – 12:00 PM  REGISTRATION  
Plaza Ballroom Foyer

7:00 AM – 12:00 PM  SPEAKER READY ROOM  
Plaza Ballroom Foyer

7:00 AM – 10:35 AM  EXHIBIT HALL HOURS  
Plaza Ballroom C

SPECIALTY GROUP BREAKFAST
7:00 AM – 7:45 AM

Topic 1:  Resident & Physician Wellness  
Seaport A  
Sponsored by the Committee on GME and Candidate Membership

Faculty:  Data/Statistics  
Kurt Rhynhart

Presentation  
Peter Yoo

Question & Answer  
Anne Larkin

Next Steps  
James Hebert and Walter Longo

Topic 2:  Global Health  
Seaport B

Faculty:  Bruce J. Leavitt & Michael R. Curci

7:00 AM – 8:00 AM  CONTINENTAL BREAKFAST  
Plaza Ballroom C
Renalase Inhibition Induces Melanogenesis Via MAPK and PI3K/AKT Signaling Pathways

*Lindsay Hollander1-3, *Xiaojia Guo1,3, *Robert Safirstein1,3, *Gary Desir1,3, Charles Cha1,3

1Yale University, New Haven, CT; 2University of Connecticut, Farmington, CT; 3VACHS, West Haven, CT

Objective: Renalase (RNLS) is a secreted flavoprotein we have previously demonstrated to promote the growth and progression of melanoma via signaling through the PI3K/AKT and MAPK pathways. The same pathways are vital to the melanocyte’s ability to regulate melanogenesis. Activation of ERK1/2 phosphorylates microphthalmia transcription factor (MITF) at serine 73, which leads to MITF ubiquitination and degradation. p38 activation leads to MITF activation and increased tyrosinase (Tyr) expression. PI3K/AKT inhibition leads to GSK3β activation and MITF phosphorylation at serine 289, which facilitates its binding to the M-box of the Tyr promoter. We tested the hypothesis that RNLS could downregulate melanogenesis by examining the effect of RNLS inhibition on melanin production.

Design: Lentiviral particles were used to transduce and stably knockdown RNLS expression in B16-F10 melanoma cells. Intra- and extracellular melanin contents were compared via 475nm absorbance measurements following dissolution in 1N NaOH. Cell lysate mRNA and protein were evaluated with qRT-PCR and western blots to illustrate the involved pathways.
**Results:** Inhibition of RNLS signaling significantly enhanced the melanogenesis of the melanoma cells. Intracellular melanin content increased 2.2-fold (p < 0.001), and extracellular melanin content increased 2.0-fold (p < 0.001) when RNLS expression was blocked. MITF gene expression was increased 2.6-fold (p = 0.003) with the knockdown of RNLS. Western blot analysis demonstrated decreased ERK1/2 and PI3K/AKT activation and increased p38 activation, as well as increased expression of Tyr, tyrosinase-related protein 1 (TRP1), and tyrosinase-related protein 2 (TRP2) in the absence of RNLS.

**Conclusions:** These results further validate that RNLS acts through the PI3K/AKT and MAPK signaling pathways in melanoma. Inhibition of RNLS signaling through these pathways leads to increased expression of MITF, Tyr, TRP1, and TRP2 and downstream increased cellular melanogenesis.
**Surgical Technique and Time to Adjuvant Chemotherapy in Breast Cancer Patients**

Anees Chagpar¹, Donald Lannin¹, *Fangyong Li¹, *Nina Horowitz¹, *Brigid Killelea¹, *Theodore Tsangaris², *Tara Sanft¹, *Malini Harigopal¹, *Xiaopan Yao¹, *Maysa Abu-Khalaf¹, *Erin Hofstatter¹, *Veerle Bossuyt¹, *Lajos Pusztai¹

¹Yale University, New Haven, CT; ²Thomas Jefferson University, Philadelphia, PA

**Objective:** Time to adjuvant chemotherapy (ACTx) affects survival in women with breast cancer and is an accepted quality metric. We sought to determine whether surgical techniques which reduce re-excision rate improve time to ACTx.

**Design:** Randomized controlled trial.

**Setting:** Academic medical center.

**Patients:** 235 patients with stage 0–3 breast cancer undergoing standard partial mastectomy (SPM) participated in this trial. 62 (26.3%) received ACTx, 4 had neoadjuvant therapy. The remaining 58 patients formed the cohort of interest.

**Interventions:** Patients were randomized to undergo routine cavity shave margins (CSM) vs. SPM.

**Main Outcome Measures:** Time to ACTx

**Results:** Median time to ACTx was 42.5 days (range; 20–97). Patients requiring re-excision had a significantly longer time to ACTx (median 40 vs. 50 days, p = 0.025). While resection of CSM was associated with a reduced re-excision rate (10.9% vs. 27.6%, p = 0.001), this did not translate into a shorter time to ACTx (median 47.5 vs. 41.0 days, p = 0.474). 12 (20.7%) patients received ACTx within 30 days; only 1 patient (1.6%) had ACTx > 90 days from surgery. Factors significantly associated with time to ACTx ≥ 30 days included ER+ status (85.7% vs. 57.1%, p = 0.05), ductal histology (p = 0.03) and need for re-excision (100% vs. 73.3%, p = 0.05). Resection of CSM resulted in ~5% more patients...
receiving aCTx within 30 days of surgery, but this did not reach statistical significance (23.3% vs. 17.9%, p = 0.749). Size and grade of invasive cancer, lymph node status, patient age, race, ethnicity, BMI, and insurance status were not associated with time to aCTx.

**Conclusion:** Re-excisions delay aCTx, but techniques such as excision of CSM may not reduce the re-excision rate significantly enough to impact time to aCTx.
±16. The Significance of Upfront Knowledge When It Comes to N2 Disease in Non-Small Cell Lung Cancer

*Daniel C. Thomas, *Brian N. Arnold, *Joshua E. Rosen,
*Michelle C. Salazar, *Frank C. Detterbeck, *Justin D. Blasberg,
*Daniel J. Boffa, Anthony W. Kim

Yale School of Medicine, New Haven, CT

Objective: Determine the impact of unsuspected N2 disease (cN0/pN2) compared with known N2 disease (cN2/pN2) in pathologic stage IIIA non-small cell lung cancer (NSCLC) patients who underwent curative intent surgery, with the secondary objective to measure the impact of adjuvant therapy.

Design: Retrospective clinical oncology dataset analysis.

Setting: Commission on Cancer accredited facilities.

Patients: The National Cancer Data Base (NCDB) was queried for patients with pathologic stage IIIA NSCLC who underwent surgical resection from 2004–2011.

Intervention: Comparison of five-year overall survival of patients with unsuspected N2 disease versus those with known N2 disease after surgical resection using Kaplan-Meier analysis. The independent effect of unsuspected N2 disease on mortality was analyzed using a multivariable model.

Main Outcome Measures: Five-year overall survival.

Results: 3,271 patients with pathologic stage IIIA NSCLC underwent curative intent surgical resection with or without adjuvant chemotherapy or chemoradiation therapy. Unsuspected N2 disease accounted for 49% of patients, were more likely to be women, and have adenocarcinoma when compared to patients with known N2 disease (both p < 0.01). Patients with unsuspected N2 disease were more likely to have T1 tumors (37% vs 32%, p < 0.01) and be treated with adjuvant chemotherapy (48% vs 46%, p < 0.01). Unsuspected N2 disease did not
impact 5-year overall survival compared with known N2 disease (34% vs 31%, NS). Multivariable analysis identified older age, higher comorbidity score, and treatment with surgery alone as independently associated with increased mortality, while presence of unsuspected N2 disease was not associated.

Conclusions: Unsuspected N2 disease compared to known N2 disease is not associated with a detrimental 5-year survival when adjuvant therapy is employed. Adjuvant chemotherapy should be recommended when N2 disease is identified after surgical resection.
Do Packed Red Blood Cell Transfusions Really Worsen Oncologic Outcomes in Colon Cancer?
*Ramzi Amri,* Anne Dinaux, *Hiroko Kunitake, Liliana Bordeianou, David Berger
Harvard Medical School/Massachusetts General Hospital, Boston, MA

**Objective:** Several reports aggregating results from small retrospective studies have argued that perioperative packed red blood cell (PRBC) transfusions may increase the risk of developing metastatic recurrence. This abstract tests this assumption in a large cohort spanning a decade of surgically treated colon cancer patients.

**Design:** Retrospective review of prospectively maintained data repository.

**Setting:** Tertiary care center.

**Patients:** All patients undergoing primary resection of colon cancer in the 2004–2014 interval (n = 1479).

**Main outcome measures:** Survival and disease-free survival, also adjusted in multivariable Cox regression standardized for follow-up, ASA score, age, sex, baseline staging, and tumor grade.

**Results:** Out 1479 patients, 304 (20.6%) received a PRBC transfusion during their index admission. During follow-up (median 43 vs. 28 months; P < 0.001), mortality rates were unsurprisingly significantly higher in patients who received PRBC’s (51.6% vs. 30.4%; P < 0.001). However, no appreciable differences in rates of long-term recurrence were identified. If anything, point estimates in multivariable Cox regression trend very slightly towards lower recurrence rates in patients with PRBC transfusions.

<table>
<thead>
<tr>
<th></th>
<th>PRBC Transfusion</th>
<th>No PRBC Transfusion</th>
<th>P</th>
<th>Hazard Ratio* (95% CI)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall metastasis</td>
<td>28.3%</td>
<td>27.0%</td>
<td>0.65</td>
<td>0.97 (0.75–1.24)</td>
<td>0.80</td>
</tr>
<tr>
<td>Baseline metastasis</td>
<td>19.7%</td>
<td>16.0%</td>
<td>0.12</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Metastatic recurrence</td>
<td>8.6%</td>
<td>11.0%</td>
<td>0.22</td>
<td>0.98 (0.62–1.54)</td>
<td>0.91</td>
</tr>
<tr>
<td>Excluding baseline mets</td>
<td>10.7%</td>
<td>13.1%</td>
<td>0.31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Death</td>
<td>51.6%</td>
<td>30.4%</td>
<td>&lt;0.001</td>
<td>1.60 (1.30–2.00)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

* Time-standardized Cox regression adjusted for baseline staging (T-stage, N-stage, tumor grade, baseline metastasis), ASA score, age, sex, where applicable

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* NESS Non-Members

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**Conclusions:** Mortality rates were significantly higher in patients with PRBC transfusions, a finding which is backed by a large body of evidence that associates PRBC transfusion with comorbidity and serious illness, rather than it being specific to a unique disease. However, contrary to earlier evidence, findings in our cohort do not support a hypothesis that perioperative PRBC transfusions have a detrimental effect on recurrence rates of surgically treated colon cancer patients. Further research should explore the reasons behind the discrepancy.

8:40 AM – 8:55 AM  INTRODUCTION OF NEW MEMBERS
*Plaza Ballroom AB*
Papers of the Year & Scientific Session IV
8:55 AM – 10:10 AM
Plaza Ballroom AB
Moderator: Dougald MacGillivray

Podium papers 8-minute presentation/5-minute discussion.
Brief papers 3-minute presentation/2-minute discussion.

18. RECOGNITION OF PAPER OF THE YEAR
CO-AWARD

Prognosis of Invasive Intraductal Papillary Mucinous Neoplasm Depends on Histological and Precursor Epithelial Subtypes

19. PAPER OF THE YEAR CO-AWARD

Laparoscopic Sleeve Gastrectomy Has Morbidity and Effectiveness Positioned Between the Band and the Bypass

Matthew M. Hutter\textsuperscript{1}, Bruce D. Schirmer\textsuperscript{2}, Daniel B. Jones\textsuperscript{3}, Clifford Y. Ko\textsuperscript{4}, Mark E. Cohen\textsuperscript{5}, Ryan P. Merkow\textsuperscript{6}, Ninh T. Nguyen\textsuperscript{7}

\textsuperscript{1}Department of Surgery, Massachusetts General Hospital, Boston, MA; \textsuperscript{2}Department of Surgery, University of Virginia Health System, Charlottesville, VA; \textsuperscript{3}Department of Surgery, Beth Israel Deaconess Medical Center, Boston, MA; \textsuperscript{4}Department of Surgery, University of California, Los Angeles Medical Center, Los Angeles, CA; \textsuperscript{5}American College of Surgeons, Chicago, IL; \textsuperscript{6}Department of Surgery, University of Colorado Hospital, Aurora, CO; \textsuperscript{7}Department of Surgery, University of California, Irvine School of Medicine, Irvine, CA

Objective: The purpose of this study was to compare outcomes and cost between single incision pediatric endoscopic surgery with a glove access technique (SIPES) and standard multiport laparoscopic appendectomy (SMPL).

Design: Retrospective Chart Review.

Patients: 18 years of age and younger who underwent a laparoscopic appendectomy between July 2012 and December 2013.

Main Outcome Measures: Patient demographics including age, gender, BMI, and race were extracted. Postoperative diagnosis, total operative time, total procedure time, PACU length of stay (LOS), total LOS, and costs were evaluated. In order to assess for pain levels, the average PACU pain score and average first 24-hour pain score were determined. Outcomes such as intra-abdominal abscess rate, wound infection, and bowel obstruction were compared.

Results: A total of 251 patients were evaluated of which 81 (32.3%) were in the SIPES group. Age, race, gender, and cases of ruptured appendicitis were comparable between groups (p > 0.40 all comparisons). There was no significant difference in the total procedure time (SIPES 59min vs. SMPL 55 min, p = 0.14) between groups. Average PACU pain score was significantly less in the SIPES group (1.8 vs. 2.7, p = 0.005); however, average post-operative scores were similar (p = 0.72). No significant difference was noted in total hospital cost; however, procedure cost was significantly lower with SIPES ($1526 vs. $3196, p < 0.001). LOS and post-operative complications between groups were similar.
**Conclusion:** SIPES with glove access is a feasible and safe approach for the management of appendicitis in children. We observed significantly lower procedure cost for the SIPES approach compared to the SMPL, and found no significant difference in total procedure time, total hospital cost, and postoperative complication rates.
Morbidity, Mortality, and Management of Gastroschisis: A Multicenter Cohort Analysis


1Center for Advanced Intestinal Rehabilitation, Department of Surgery, Boston Children's Hospital and Harvard Medical School, Boston, MA; 2Vermont Oxford Network, Burlington, VT; 3University of Vermont, Burlington, VT

Objective: To quantify gastroschisis outcomes and analyze factors predictive of morbidity and mortality.

Design: Inception cohort.

Setting: 175 North American centers with neonatal intensive care units participating in a prospective clinical data collection.

Patients: Neonates with gastroschisis and birth weight >1500 g born 2009–2014 at a participating center or transferred to a participating center within 28 days of birth.

Main Outcome Measure(s): Survival (discharge home or alive in hospital at one year), length of stay, sepsis (defined by positive blood or cerebrospinal fluid culture), major congenital anomalies, necrotizing enterocolitis, surgical procedures, mode of delivery, weight-for-age at discharge.

Results: Gastroschisis was diagnosed in 4,420 neonates with median birth weight 2,410g (IQR 2,105–2,747). Survival was 97.8%, with a 37 day median LOS (IQR 27–59). Sepsis was the only significant independent predictor of mortality (P = 0.04). Significant independent determinants of LOS and the percentage of neonates affected were as follows: bowel resection (9.8%, P < 0.0001), sepsis (8.6%, P < 0.0001), presence of other congenital anomalies (7.6%, of which 73% were intestinal atresias, P < 0.0001), necrotizing enterocolitis (4.5%, P < 0.0001), and small for gestational age (37.3%, P = 0.0006). Abdominal surgery in addition to gastroschisis repair occurred in 22.3%, with 6.4% receiving gastrostomy or jejunostomy tubes and 6.3% requiring ostomy creation. At discharge, 57% were <10th percentile weight-for-age. Mode of delivery (52.4% caesarean section) was not associated with any differences in outcome.

± RPE Eligible Papers
* NESS Non-Members
Conclusions: This large multicenter cohort demonstrates that although neonates with gastroschisis have excellent overall survival they remain at risk for: death from sepsis, prolonged hospitalizations, multiple abdominal operations, and malnutrition at discharge. Outcomes appear unaffected by the use of cesarean section. Further opportunities for quality improvement include sepsis prevention and enhanced nutritional support.
Objective: To compare the effectiveness of Roux-n-Y gastric bypass (LRYGB) and laparoscopic sleeve gastrectomy (LSG) among super-super obese (SSO) (BMI > 60) patients. Design A retrospective review of a prospective database of SSO patients undergoing LRYGB or LSG from 2009–2015 was performed. Percent of excess weight loss (EWL) at 6 and 12 months was documented with success defined as EWL >30% at 6 and >50% at 12 months. Univariate associations between success of therapy and resolution of obesity related comorbidities were determined. T tests and Chi2 were performed. Setting: Tertiary care center.

Patients: SSO patients.

Interventions: LRYGB vs. LSG.

Main Outcome Measure: EWL percentage at 6 and 12 months.

Results: Fifty-five SSO patients underwent bariatric surgery during this time. The mean EWL at 6 months was 30.6 (±19.37) in LRYGB vs. 23.8 (±12.6) in LSG (p = 0.09). The mean EWL at 12 months was 50.6 (±22.3) after LRYGB and 37.8 (±13.5) after LSG (p = 0.11). There was no difference in success of therapy 6 months [56.5% (26/46) LRYGB and 41.6% (5/12) LSG, (p = 0.35)] at 6 months or 12 months [51.7% (15/29) LRYGB and 22.2% (2/9) LSG (p = 0.13)]. Univariate analysis revealed an association between resolution of hypertension, obstructive sleep apnea and CPAP use with success of therapy at 6 months (p = 0.007, 0.04 and 0.04 respectively). At 12 months, only resolution of CPAP use remained statistically significant (p = 0.03).

Conclusion: SSO patients have a similar EWL and success rates after LRYGB and LSG at 6 and 12 months. The influence of comorbidities on failure of therapy warrants further investigation.

NESS Non-Members
Objective: Primary and secondary hepatic malignant lesions are common diagnoses and often require surgical intervention. We aim to determine if multivisceral resection involving hepatectomy impacts perioperative outcomes.

Design: Retrospective analysis of the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) database from 2005 to 2012. Chi-square tests and student’s t-tests were used to compare categorical and continuous variables, respectively. Logistic regression analysis adjusted for age, BMI, wound classification and ASA status was performed for all variables.

Setting: National cohort of patients registered in ACS NSQIP.

Patients: Patients who underwent hepatic resections for malignant indications with or without synchronous organ resection.

Interventions: All patients underwent hepatectomy for malignant indication.

Main Outcome Measures: Differences in 30 day morbidity or mortality between patients who did and did not have multivisceral resections during hepatectomy.

Results: 10424 patients met inclusion criteria. Indications included malignant neoplasm of liver/intrahepatic bile ducts (30%), gallbladder/extrahepatic bile duct cancer (6%) or metastatic lesions (64%). 384 patients (4%) underwent concomitant multivisceral resection. The most common organs involved in synchronous resection were colon (n = 194), pancreas (n = 71), spleen (n = 67) and stomach (n = 52). Multivisceral resection was associated with a longer length of stay (8 vs 12 days, p < 0.001) and increased risk of overall complications (OR 2.4, p < 0.001), including wound, respiratory and infectious complications and stroke, bleeding and myocardial infarction. 30-day mortality was similar.
**Conclusions:** In this national cohort of hepatectomy patients, synchronous resection of additional organs was associated with significantly higher 30-day morbidity and comparable 30-day mortality rates. This increased risk for complications associated with a multivisceral approach should be considered when planning a hepatic resection for malignant lesions.
What Are the Long-Term Outcomes of Laparoscopic Paraesophageal Hernia Repairs Without Mesh?

*Damien J. Lazar¹, Desmond H. Birkett², David M. Brams²,  
*Heather A. Ford², Dmitry Nepomnayshy²  
¹Tufts University School of Medicine, Boston, MA; ²Lahey Hospital and Medical Center, Burlington, MA

Objective: To determine long-term patient-specific outcomes of primary paraesophageal hernia (PEH) repair.

Design: Survey.

Setting: Tertiary Referral Center.

Patients: Chart review identified 217 patients with PEH repair between 2000 and 2012 without the use of mesh.

Interventions: Questionnaires mailed to patients.

Main Outcome Measures: Self reported outcomes of reoperation, symptom control, patient satisfaction, and quality of life.

Results: Out of 217 patients, 19 were deceased and 109 (53.5%) returned completed questionnaires. 87 respondents had undergone laparoscopic repair, and 19 had undergone open repair, with mean times from surgery of 6.6 years (sd = 3.9) and 7.0 years (sd = 4.1), respectively. Reoperation rate was 9.9% (n = 8) and 5.3% (n = 1) for laparoscopic and open repair groups (p = 0.720). 95.4% (n = 82) of laparoscopic and 89.5% (n = 17) of open repair patients indicated that dysphagia, heartburn, and regurgitation improved following surgery (p = 0.318). 73.6% (n = 64) and 77.8% (n = 7) of laparoscopic and open repair patients responded that symptoms are currently controlled (p = 0.320), with 54.0% (n = 47) of laparoscopic and 26.3% (n = 5) of open repair patients still requiring medication (p = 0.029). 90.6% (n = 78) and 89.5% (n = 17) in the laparoscopic and open groups, respectively, stated that they would still choose to have the operation in retrospect (p = 0.713).

Conclusions: Mesh placement for PEH is controversial. In this study, we show that laparoscopic and open PEH repair without mesh lead to favorable long-term outcomes in a majority of patients including low rates of reoperation, high satisfaction, and good symptom control—although half of those undergoing laparoscopic repair will require medication to achieve it. This is one of a few studies describing long term patient specific outcomes that are useful when counseling patients about laparoscopic PEH repair.

* NESS Non-Members
Objective: The goal of this study is to determine if Esophageal Adenocarcinoma (EAC) can be diagnosed from, or treatment response monitored with blood-based tests to detect circulating tumor DNA. Studies have detected tumor-specific DNA in plasma, which raises the possibility of “liquid biopsies” using mutated tumor DNA as a diagnostic and prognostic biomarker. We developed a novel approach using molecular barcodes to detect mutant alleles with frequencies below 1%, and are using this to evaluate liquid biopsy for diagnosis and treatment monitoring of esophageal adenocarcinoma.

Design: Cohort Study—DNA from patients with EAC was sequenced using targeted gene panels to identify tumor mutations. Assays with molecular barcodes were designed to identify these mutations in plasma, and sequencing libraries subsequently prepared and analyzed.

Setting: General community.

Patients: Patients with pathologic evidence of EAC were identified for study. 66 patients with various stages of disease consented to participate. One set had blood collected at a single time point (n = 32). A second set undergoing neoadjuvant therapy followed by potential surgery had blood collected longitudinally across treatment (n = 34). Tumor samples were obtained via biopsy or surgical resection.

Interventions: N/A.

Main Outcome Measures: Identification, from plasma DNA, of mutations of interest found in the primary tumor.

Results: Tumor Mutations were identified in 32 patients. Of 18 analyzed to date, tumor mutations were identified in 7 plasma samples, with two patients demonstrating multiple mutant alleles. All mutations were present below 0.5% frequency.
**Conclusions:** Tumor DNA can be detected in plasma of patients with EAC using ultra-sensitive sequencing. Possible applications include prognostication in early stage patients and rapid monitoring of therapeutic response and recurrence. Further work to evaluate this is ongoing.

**10:10 AM – 10:40 AM**

**COFFEE BREAK WITH POSTER SESSION, VISIT EXHIBITS**

*Plaza Ballroom C*
Objective: To determine how breast cancer recurrences were detected in our sample population of breast cancer survivors. We hypothesize that the majority of breast cancer recurrences are detected by patients.

Design: Retrospective Observational Chart Review.

Setting: Academic Medical Center, Comprehensive Breast Cancer Center.

Patients: 136/1999 patients were identified with a documented breast cancer recurrence (average age–56 years) between 2010 and 2015.

Intervention: None.

Main Outcome Measures: Categorical: Modality of detection (patient, clinician, scheduled imaging), insurance (Medicare, private), ambulation status (assistance, no assistance), and living situation (isolated, non-isolated). Continuous: age at diagnosis, age at recurrence, and time of recurrence detection.

Results: 106 (78%) of 136 breast cancer recurrences were patient-detected, 16 (12%) were detected by scheduled imaging, and 14 (10%) were clinician-detected. There was a significant difference in time of recurrence detection with respect to mode of detection ($P < 0.01$ patients vs. oncologists & scheduled imaging). Median time to recurrence was 6 years in the patient detection group compared to 3 years each for the clinician and imagining detection groups.

Conclusion: The majority of breast cancer recurrences in our patient population are patient-detected, as opposed to routine clinical surveillance exams or scheduled imaging. This finding is unaffected by patient age, insurance, ambulation status, or living situation. There is a significant difference in the modality of breast cancer recurrence detection with respect to time–late recurrences were predominantly patient-detected, whereas early recurrences were detected by clinicians and scheduled imaging studies. This finding supports patient-directed surveillance and provides rationale to limit the duration of clinical follow-up in breast cancer patients.
Unplanned Reoperation After Hepatectomy: An Analysis of Risk Factors

Brigham and Women’s Hospital/Harvard Medical School, Boston, MA

Objectives: To identify predictors for reoperation after index hepatectomy.

Design: Retrospective cohort study.

Setting: 435 U.S. hospitals participating in the ACS NSQIP.

Patients: Patients undergoing anatomic/non-anatomic hepatectomy from 2011–2013 (years for which unplanned reoperation data is available) based on CPT codes. We excluded patients with missing reoperation data and emergent indication for liver resection.

Interventions: Hepatectomy (see above).

Main Outcome Measures: Unplanned reoperation within 30 days.

Results: 343 (3.7%) of 9,195 patients required reoperation within 30 days of index hepatectomy. Calculous disease and extrahepatic biliary malignancies were associated with the highest reoperation rates (9.5% and 6.0%, respectively.) The index procedures with the highest reoperation rates were trisegmentectomy (7.3%) and right lobectomy (4.7%). Reoperative patients had increased index operative duration (323 ± 174 min versus 243 ± 125 min, p < 0.001), postoperative transfusion (57% versus 23%, p < 0.001), wound complications, cardiorespiratory, renal, thromboembolic, and infectious events. While there were a variety of reasons cited for reoperation, hemorrhage was the most common indication (9.7%). Male sex, ASA class 4, and index right lobectomy or trisegmentectomy were all independent predictors of unplanned reoperation (odds ratio 1.36, p = 0.007; 1.95, p = 0.003; 1.56, p = 0.001 and 2.46, p < 0.0001, respectively). All reoperations occurred during index hospitalization and resulted in longer length of stay (19.4 ± 17 days versus 7.2 ± 6.9 days, p < 0.001). Unplanned reoperation was also associated with increased 30-day readmission (32.9% versus 10.9%, p < 0.001) and mortality (16.9% versus 1.9%, p < 0.001).

Poster of Distinction
* NESS Non-Members
Conclusion: Index procedural and postoperative event characteristics are risk factors for unplanned reoperation within 30 days after hepatectomy in this largest and most diverse sample to date. Further study will allow the design of interventions to prevent unplanned reoperations and to mitigate their impact on patient outcomes and hospital quality assurance metrics utilized by the Joint Commission and CMS PQRS.
**P3.** Improving ACGME Compliance Using Resident Run Lean Process

_Frederick H. Millham_¹, *Suliat Nurudeen_², *Joseph Mets_², *Christopher Burns_¹, Douglas Smink_²

¹_South Shore Hospital, Weymouth, MA; ²Brigham and Women’s Hospital, Boston, MA

**Objective:** To improve ACGME work hours compliance.

**Design:** Prospective Longitudinal Before and After Study

**Setting:**

**Regional Hospital Participants:**

**Surgical Residents and Faculty Intervention:** We used Lean Process Improvement methods to re-design resident work patterns. We used structured brainstorming, precise process mapping, experimentation and real-time measurement of compliance and a balance measure. Changes shown to improve compliance in short experiments included: 1) Shortening the overnight shift, 2) Better defining resident roles, 3) Establishing a period free from new assignments, 4) Holding a weekly compliance meeting, 5) Education regarding ACGME rules.

**Main Outcome Measures:** 1) Resident work hours of less than 80 averaged over four weeks, 2) Average of one day off per week averaged over four weeks, 3) Maximum work day of 16 hours for interns and 24 hours for other residents, 4) a minimum 10 hr break between shifts and 5) Percent of surgeries with resident participation before and after intervention. Results. Prior to intervention 20 work hour violations over 231 resident-days (PGY1) (p < 0.001); 12 work hour violations over 278 resident-days (PGY2) (p = 0.001). There were no violations in either following the intervention, over periods of 227 resident days and 234 resident-days respectively. Work hour violations by PGY4 resident were unchanged by the intervention, occurring twice in 91 resident-days before and four times in 94 resident-days after intervention. Resident involvement in surgical procedures was unaffected by the intervention; 72% of general surgical procedures having a resident assistant before and 75% after the intervention.

**Conclusion:** A resident-led, Lean program can improve work hours compliance by junior residents without affecting resident participation in surgery. Compliance by Chief residents was unaffected by the intervention.

* Poster of Distinction
* NESS Non-Members
Objective: Concerns, including those of the lay public, regarding quality of care during the month of July at academic medical institutions is increasing. Newly-promoted trainees at all levels with increased responsibilities are thought to be causative. This study seeks to examine patients undergoing pancreaticoduodenectomy (PD) and determine correlation between operative outcomes and date of surgery. PD seems an ideal metric to assess such outcomes, as care of these patients at an academic center involves trainees across multiple departments and postgraduate levels.

Design: Retrospective review of prospective database.

Setting: Academic tertiary center.

Patients: 460 consecutive patients underwent PD by a single surgeon from 7/2003 to 12/2015. 76.9% of cases were performed for malignancy.

Intervention: N/A.

Outcome Measures: The primary outcome measure was overall operative morbidity as determined by the Clavien-Dindo scoring system. Secondary outcomes included individual adverse events of interest, length of stay, and operative blood loss.

Results: The results are summarized in the table below. No significant difference was observed in the quarterly incidence or severity of Clavien-Dindo complications and other measured events, such as delayed gastric emptying or postoperative pancreatic fistula. Similarly, the incidence of adverse events in the month of July did not exceed other months of the year.
<table>
<thead>
<tr>
<th></th>
<th>July–September</th>
<th>October–December</th>
<th>January–March</th>
<th>April–June</th>
<th>July–Alone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients (N)</td>
<td>126</td>
<td>115</td>
<td>116</td>
<td>115</td>
<td>49</td>
</tr>
<tr>
<td>Operative Blood Loss (median, in mL)</td>
<td>400</td>
<td>400</td>
<td>350</td>
<td>340</td>
<td>400</td>
</tr>
<tr>
<td>Delayed gastric emptying (frequency)</td>
<td>14.4%</td>
<td>13.9%</td>
<td>13.9%</td>
<td>14.8%</td>
<td>10.4%</td>
</tr>
<tr>
<td>Postoperative pancreatic fistula, any grade (frequency)</td>
<td>8%</td>
<td>8.7%</td>
<td>8.7%</td>
<td>12.0%</td>
<td>6.25%</td>
</tr>
<tr>
<td>Clavien-Dindo Score (median, on discharge)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
</tr>
<tr>
<td>Clavien-Dindo Score (median, 30 day)</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Length of Stay (median)</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Reoperation (frequency)</td>
<td>3.2%</td>
<td>6.9%</td>
<td>6.9%</td>
<td>5.5%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Readmission (frequency)</td>
<td>20.8%</td>
<td>20%</td>
<td>20%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Mortality (frequency)</td>
<td>1.6%</td>
<td>0.9%</td>
<td>0.9%</td>
<td>0.9%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Conclusions:** Despite concerns regarding care at major teaching hospitals early during the academic year, operative outcomes were not demonstrably altered in patients undergoing PD. As such, we conclude that such concerns amongst patient undergoing major abdominal surgery may be unfounded.
Impact of a 12 Lymph Node Harvest Quality Metric on Colon Cancer Outcomes

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Objective: A lymph node (LN) harvest of 12 or more nodes has become a quality metric for adequacy of resection. A <12LN yield is considered a high-risk threshold for stage II patients. In theory, as institutions achieve ≥12LN resections, there should be a migration of patients previously felt to be stage II into stage III, as a greater LN harvest should capture otherwise missed positive nodes. This should then lead to outcome improvements for stage II cases, as it will include only “true” stage II patients.

Design: Retrospective review of prospectively maintained data repository.

Setting: Tertiary care center.

Patients: All operative AJCC stage I-III colon cancer patients (2004–2011; n = 926).


Results: Staging distributions did not change significantly, while the number of stage II patients with <12LN decreased drastically from 18.1% to 2.4% (P < 0.001). Concurrently, recurrence rates remained stable (P = 0.289), while survival improved (P = 0.025).
<table>
<thead>
<tr>
<th></th>
<th>2004–2007 (n = 461)</th>
<th>2008–2011 (n = 465)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>27.7% (137)</td>
<td>26.9% (129)</td>
<td>0.82</td>
</tr>
<tr>
<td>Stage III</td>
<td>35.4% (175)</td>
<td>35.7% (171)</td>
<td>0.93</td>
</tr>
<tr>
<td>Stage II</td>
<td>30.2% (149)</td>
<td>34.2% (164)</td>
<td>0.17</td>
</tr>
<tr>
<td>Adjuvant chemotherapy</td>
<td>18.1%</td>
<td>18.3%</td>
<td>0.97</td>
</tr>
<tr>
<td>Screening diagnoses</td>
<td>19.5%</td>
<td>22.6%</td>
<td>0.5</td>
</tr>
<tr>
<td>≥12LN yield</td>
<td>81.9%</td>
<td>97.6%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>LN yield (median, IQR)</td>
<td>17 (13–22)</td>
<td>23 (18–30)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>3-yr recurrence*</td>
<td>10.6% ±2.7</td>
<td>16.5% ±3.0</td>
<td>0.289</td>
</tr>
<tr>
<td>5-yr recurrence*</td>
<td>14.2% ±3.1</td>
<td>8.1% ±3.2</td>
<td></td>
</tr>
<tr>
<td>3-yr survival*</td>
<td>82.9% ±3.2</td>
<td>86.8% ±2.8</td>
<td>0.025</td>
</tr>
<tr>
<td>5-yr survival*</td>
<td>71.7% ±3.9</td>
<td>81.4% ±3.3</td>
<td></td>
</tr>
</tbody>
</table>

* Kaplan-Meier estimates (percentage outcome ± standard error)

**Conclusions:** In a center that already had a relatively high success rate in harvesting ≥12LN, improving the rate to nearly 100% did not impact surgical outcomes. With nearly all patients above the ≥12LN threshold, it becomes less useful as a prognostic litmus test; implying that a node of harvest of ≥12LN reached its upper limit as a quality metric. In similar situations, other factors and quality metrics should be explored to estimate risk and resection quality in stage II colon cancer patients.
Objective: To determine if decreasing immunosuppression is associated with worse patient and graft survival.

Design: Retrospective cohort.

Setting: University associated referral hospital.


Interventions: None.

Main Outcome Measures: Patient and graft survival.

Results: We evaluated 351 patients including 35(10%) on two-agent immunosuppression (TA). Of these, 79% were maintained on tacrolimus/prednisone; the remainder were maintained on either mycophenolic acid/prednisone or tacrolimus/mycophenolic acid. The rationale for modifying therapy included infectious complications (74%), medication intolerance (51%) and malignancy (17%). Three hundred and sixteen patients in the same era were maintained on TMP. Mean follow-up was 63 months for TMP group and 60 months for TA group. There was no difference between TMP and TA groups in regards to age (49 vs 53, NS), sex (65% male vs 51% male, NS), incidence of diabetes (27% vs 23%, NS), proportion live donor recipient (43% vs 31%, NS), nadir creatinine (1.36 vs 1.30, NS), renal function (Cr 1.32 vs 1.33, NS) and rate of acute rejection (13% vs 11%, NS). There was no difference in patient survival or graft survival between the groups (Figure 1).
Conclusions: Changes in initial immunosuppression are frequent after renal transplantation; however, reduction in immunosuppression carries a risk of new complications or acute rejection. We demonstrated that reduction to a two-drug regimen based on clinical evidence of over-immunosuppression while on TMP was well tolerated and did not affect the rate of rejection, renal allograft function or intermediate-term graft survival.
Objective: To compare outcomes between hepatectomy and liver transplantation in transplantable hepatocellular carcinoma (HCC) patients with well compensated cirrhosis.

Design: Retrospective study.

Setting: Tertiary referral center.

Patients: Consecutive sample of 251 HCC patients with Child-Pugh class A cirrhosis. Of those, 180 fulfilled the Milan criteria and underwent either liver resection (R-group, N = 90) or transplantation (T-group, N = 90) between 1993–2015.

Main Outcome Measures: Patient characteristics, length-of-stay (LOS), post-operative complications (POC), overall survival (OS), recurrence-free survival (RFS), 3-, 5- and 10-year OS and RFS rates were compared between groups.

Results: Transplantation patients were younger (mean age: T-group 59.0 ± 6.1 y, R-group 63.9 ± 11.7 y; p = 0.001), had a higher MELD score (T-group 9.4 ± 4.2, R-group 6.6 ± 4.6; p < 0.001), and lower platelets (T-group 122 ± 57 x 10^3/μL, R-group 182 ± 74 x 10^3/μL; p < 0.001). Additionally, hepatitis B was more frequent in R-group (T-group:11.2%; R-group: 27.0%; p = 0.008), while hepatitis C in the T-group (T-group: 70.8%; R-group: 34.8%; p < 0.001). LOS and POC rate were similar between groups (mean LOS: T-group 8.7 ± 6.0 d; R-group 8.0 ± 7.4 d; POC rate: T-group 28.4%; R-group 24.4%). OS and 3 y, 5 y, and 10 y OS rates were not-statistically-significantly higher for T-group patients (median OS: T-group 119.7 m; R-group 101.8 m; p = 0.15; 3 y, 5 y and 10 y OS rate: T-group 80%, 80%, 66%; R-group 77%, 62%, 41%, respectively). In contrast, RFS was significantly longer in T-group (median RFS: T-group 119.7 m; R-group 33.5 m; p < 0.001), and 3 y, 5 y and 10 y RFS rates were higher for transplantation patients (3 y, 5 y and 10 y RFS rate: T-group: 93%, 87%, 87%; R-group: 47%, 41%, 29% respectively). In multivariate analysis, only T stage was an independent predictor of survival (p = 0.005).
**Conclusions:** Although liver transplantation confers better RFS than resection in Child-Pugh class A transplantable HCC patients, it does not provide an OS benefit. These results may guide optimal treatment of such patients.
Background: Aim to evaluate long-term safety and efficacy outcomes in patients with ischemic mitral regurgitation (IMR) and multi-vessel coronary artery disease who underwent coronary artery bypass grafting (CABG) with and without mitral valve repair (MVR) at Maine Medical Center (MMC).

Design: Retrospective cohort study, median follow-up 5 years.

Setting: Single center, tertiary care hospital in Portland, ME.

Patients: All patients with IMR and multi-vessel coronary artery disease who were referred to MMC for surgical revascularization with or without simultaneous MVR between January 1, 2004 and December 31, 2009. Cohort includes 151 patients with mild IMR (1+ by echocardiogram); 121 with moderate IMR (2+); 124 with severe IMR (3+ and 4+).

Intervention: CABG with and without simultaneous MVR.

Main Outcome Measures: Primary outcome is mortality. Secondary outcomes include degree of mitral insufficiency, progression to severe IMR, and ejection fraction.

Results: 7% of patients with mild IMR, 53% with moderate IMR, and 93% with severe IMR underwent the dual procedure. All-cause mortality was 17% in mild IMR; 23% in moderate; 22% in severe. Post-operative progression to severe IMR was 1% in mild IMR; 6% in moderate; 4% in severe. Ejection fraction was similar across all groups. In moderate IMR there was a non-significant trend toward decreased mortality in those receiving CABG plus MVR.

Conclusions: Across the entire cohort, survival was similar between patients who underwent CABG alone and CABG plus MVR, despite the dual procedure group having higher degree IMR. CABG plus MVR can be performed safely with low perioperative mortality and low rates of IMR recurrence; furthermore, both long-term mortality and rates of progression to severe IMR are low at MMC relative to previously published literature.
**P9.** “Never Events” in Cardiac Surgery: Serious Reportable Events Continue to Occur in Our Patients

*Michael P. Robich¹, Alik Farber², Reed Quinn¹,
*Denis Rybin², *Douglas Sawyer¹, *Gheorghe Doros²,
Robert Kramer¹, *Jeffrey J. Siracuse²

¹Maine Medical Center, Portland, ME; ²Boston Medical Center, Boston, MA

**Objective:** “Never events” (NE) are preventable adverse events that occur in the hospital. We sought to understand the occurrence of serious reportable events in patients undergoing cardiac operations.

**Design:** Retrospective review, Nationwide Inpatient Sample, 2003–2011.

**Setting:** Hospitals in the US.

**Patients:** 588,417 adult patients undergoing isolated primary coronary artery bypass grafting (CABG) (398,816), valve (181,066), and thoracic aortic operations (8,535).

**Main Outcome Measures:** Never events.

**Results:** There were 4377 NE (0.7%). The rate of NE increased from 0.5% in 2003 to 1.1% in 2011, P < .001. In 2008, CMS announced they would no longer reimburse NE, but the risk of NE increased (OR 1.7 after 2008 [(95% Confidence interval) 1.6–1.8] Falls/trauma were most common (42%) followed by vascular catheter infections (15%), complications of poor glucose control (14%), mediastinitis (13%), UTI (10%), advanced pressure ulcer (5%), retained foreign body (4%), air embolism (0.9%), and blood incompatibility (.02%).

On multivariate analysis risk factors included aortic (OR 2.5 [1.9–3.2]) and valve (1.3 [1.1–1.4]) operations vs. CABG, non-elective (2.4 [2.1–2.7]) and weekend admissions (1.3 [1.1–1.4]). Female sex (1.3 [1.2–1.5]), metastatic cancer (2.3 [1.1–5]), diabetes (1.5 [1.3–1.8]), renal failure (1.5 [1.2–1.8]), and CHF (1.4 [1.3–1.6]) were associated with increased risk of NE (P value for all <.001). Factors not associated with increased risk included admission July through September (P .7) and teaching hospital (P .09). Length of stay with NE was 21 ± 19 days vs. 10 ± 8 without (P < .001). Mortality was 8% with NE and 3% without (P < .001). Median charges with NE were $245,000 ± 244,000 vs. $123,000 ± 102,000 (P < .001).

* Poster of Distinction
* NESS Non-Members
**Conclusions:** The rate of serious reportable events after cardiac surgery was low, but increased over time. Understanding risk factors may help prevent these potentially avoidable complications.
Predictors of Mortality in Nonagenarian and Centenarian Emergency Surgery Patients: A Decision Making Aid

Massachusetts General Hospital, Boston, MA

Objective: The decision to operate in nonagenarian and centenarian emergency surgery patients (NCESPs) is complex. We sought to: 1) determine the predictors of mortality, and 2) suggest a surgical decision-making aid for NCESPs.

Design/Setting: The 2011–2012 ACS-NSQIP database was queried for all NCESPs, using the “emergent variable”. Univariate then multivariable analyses were performed to identify preoperative independent predictors of 30-day mortality. NCESPs mortality rates for different risk factors combinations were also studied.

Patients: All NCESPs

Main Outcome Measure: 30-day mortality

Results: A total of 1,186 NCESPs were included; 66.9% were female and 30-day mortality rate was 18.8%. In multivariable analyses, independent predictors of 30-day mortality were: total functional dependence (OR 3.94, 95% CI 1.05–2.73), steroid use (OR 2.72, 95% CI 1.18–6.27), smoking within one year (OR 3.2, 95% CI 1.3–7.82), blood urea nitrogen > 40 mg/Dl (OR 1.69, 95% CI 1.05–2.73), ventilator requirement within 48 hours preoperatively (OR 3.25, 95% CI 1.22–8.68), ASA ≥3 (OR 2.94, 95% CI 1.11–7.76), male gender [OR 1.46, 95% CI 1.06–2.144], sepsis (OR 2.63, 95% CI 1.59–4.34) and septic shock (OR 5.25, 95% CI 2.7–10.2). A decision-making aid reporting the mortality rates associated with combinations of risk factors is presented in Table 1. For example, all patients on steroids that were ventilator dependent preoperatively died within 30 days postoperatively.

Conclusions: NCESPs are a high-risk population with unique mortality predictors making their perioperative decision-making challenging. We present here a user-friendly decision-making tool that could prove useful for patient and family perioperative bedside discussions.

* Poster of Distinction
* NESS Non-Members
<table>
<thead>
<tr>
<th>N (%)</th>
<th>BUN &gt; 40</th>
<th>Total Functional Dependence</th>
<th>Preoperative Ventilator Dependent</th>
<th>Septic Shock</th>
<th>Use of Steroids</th>
<th>Smoker within One Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUN &gt; 40</td>
<td>75 (34%)</td>
<td>11 (61%)</td>
<td>8 (63%)</td>
<td>35 (71%)</td>
<td>7 (78%)</td>
<td>4 (80%)</td>
</tr>
<tr>
<td>Total Functional</td>
<td>11 (61%)</td>
<td>29 (48%)</td>
<td>2 (50%)</td>
<td>6 (55%)</td>
<td>2 (67%)</td>
<td>1 (50%)</td>
</tr>
<tr>
<td>Dependence</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Preoperative</td>
<td>5 (63%)</td>
<td>2 (50%)</td>
<td>17 (59%)</td>
<td>16 (69%)</td>
<td>1 (100%)</td>
<td></td>
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<tr>
<td>Ventilator dependent</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Septic Shock</td>
<td>25 (71%)</td>
<td>6 (55%)</td>
<td>16 (69%)</td>
<td>44 (57%)</td>
<td>8 (75%)</td>
<td></td>
</tr>
<tr>
<td>Use of steroids</td>
<td>7 (78%)</td>
<td>6 (67%)</td>
<td>1 (100%)</td>
<td>8 (75%)</td>
<td>16 (41%)</td>
<td>1 (33%)</td>
</tr>
<tr>
<td>Smoker within one</td>
<td>4 (80%)</td>
<td>1 (50%)</td>
<td></td>
<td></td>
<td>1 (33%)</td>
<td>12 (40%)</td>
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<tr>
<td>year</td>
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</tbody>
</table>
P11. Use of Hyperspectral Imaging to Assess Vascular Dysfunction in Patients with Diabetes

*Gianluca Citoni, *Brandon Sumpio, *Jason Chin, Bauer Sumpio
Yale University, New Haven, CT

Objective: The aim of this pilot study was to determine if HSI could be used to demonstrate the role of Diabetes Mellitus in the upper extremity of patients with peripheral artery disease (PAD) or coronary artery disease (CAD).

Design: Prospective study.

Setting: Out-patient.

Patients: 48 consented patients during a 16-week period with diagnosed PAD or CAD with or without Diabetes Mellitus.

Interventions: Patients underwent HSI at the bicep, forearm, and palm before and after cuff occlusion (50 mmHg above systolic) for 5 minutes. The absolute and percent changes in oxyHb and deoxyHb levels were assessed. Medical records of enrolled patients were reviewed for demographic data, medications, surgical history, and other pertinent information. Patients were separated into PAD or CAD with diabetes and PAD or CAD without diabetes. Baseline differences in categorical variables of medical history were evaluated using the chi-square test. Differences in HSI values between the groups were evaluated using the two-tailed t-test with statistical significance determined as P < 0.05. Main Outcome Measures: The absolute and percent changes in oxyHb and deoxyHb levels were assessed.

Results: The study enrolled 22 diabetic patients and 26 patients without diabetes. The distinct groups had comparable values at baseline. No differences were noted for oxyHb and deoxyHb values in all of the different evaluated areas.

Conclusions: This study presents a novel way to measure endothelial dysfunction similarly to the brachial artery reactivity test. Our results suggest the capability of HSI technology to be not influenced by Diabetes Mellitus in PAD or CAD patients. This could enable early screening and tracking of PAD or CAD patients in a diabetic cohort.

* NESS Non-Members
P12. Reduced Racial Disparity in Outcomes of Kidney Transplant Recipients

Reduced Racial Disparity in Outcomes of Kidney Transplant Recipients

*E. Iranpour, *A. Tavabi, *Reginald Gohh, Paul Morrissey, Reza Saidi

* Brown University, Providence, Ri

Objective: Earlier studies reported inferior outcomes among African-American (AA) compared with white kidney transplant (KT) recipients.

Design: Prospective database.

Setting: Single center.

Patients: During 1997–2015, 1102 patients underwent KT at our center. Hispanics, pediatric patients and recipients of multi-organ transplants were excluded.

Main Outcome Measures: We examined the renal allograft survival in two eras; 1997–2005 and 2006–2015.

Results: AA and white recipients did not differ in age, gender or time to transplantation. AA had inferior 5- year allograft survival compare to whites; 67.8 vs 76.2%, respectively (p < 0.001). However, comparing era-1 (1997–2005) with era-2 (2006–2015), we noted an improvement in allograft survival in AAs recipients; 65.1 vs 78.1%, respectively (p < 0.001). The allograft survival in era-2 was comparable between AA and whites. Allograft survival in whites was comparable between era-1 and era-2 (76.8 vs 78.1%). Allograft survival in AA who received LDKT did not improved comparing era-1 and era-2 (76.4 vs 77.9%). However, allograft survival in AA who received DDKT improved during era-2 compare to era-1; 73.6 vs 66.4%, respectively (p = 0.009).
**Conclusions:** In era 2, we observed no disparity in AA outcomes compared with whites. This result should promote access to KT in AA patients. Further studies are needed to determine the reasons for improved outcomes for AA in recent years.
Objective: This study aims to assess whether there is a difference in the distribution of surgical resections of malignancy between pregnant and non-pregnant women.

Design: Retrospective analysis of the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) database from 2005 to 2012. Chi-square tests and student’s t-tests were used to compare categorical and continuous variables, respectively. Logistic regression analysis adjusted for age, was performed for all variables.

Setting: National cohort of patients registered in ACS NSQIP.

Patients or Other Participants: Female patients aged 18–49 years with a ICD-9 diagnosis of “neoplasm” (codes 140–239) were included. Patients without a documented pregnancy status were excluded.

Interventions: Patients who underwent surgical resection for malignancy were analyzed based on pregnancy status.

Main Outcome Measures: Determine if there are differences in distribution of resections for cancer between pregnant and non-pregnant population.

Results: 42,732 subjects with malignancies surgically treated during child-bearing age were identified. 0.33% (n = 143) were pregnant. The most common tumors requiring resection during pregnancy were breast (45%), thyroid (31%), and colorectal (2%). The distribution for most cancers was similar between groups. The age-adjusted odds ratio was significantly increased in breast, major salivary gland and oropharyngeal malignancies (p < 0.05). The proportion of resected colorectal cancers was significantly lower in pregnant women (p < 0.05).

Conclusion: This study serves as the first contemporary overview of malignancies resected in women of childbearing age. This study demonstrates that the age-adjusted proportion of resections among pregnant women was significantly greater in breast, major salivary gland and oropharyngeal cancers and lower for colorectal cancers.
Objective: We wanted to understand the opioid tablet (OP) prescribing and consumption patterns among patients undergoing breast cancer surgery at our center. Our aim was to determine an optimal standard post-operative opioid prescription (OP) practice that meets patients’ needs without over prescribing.

Design: This is a descriptive retrospective cohort study. As part of an ongoing continuous improvement program we recorded the total number of OP prescribed by our surgeons from January 15, 2016 through March 4, 2016, and the number of OP actually consumed during the post op period. Also recorded were covariates including the type of surgical procedure performed, patient’s age, narcotic use history and NCCN pain score before and after surgery. We then compared patterns of prescribing and consumption using univariate and multivariate statistical methods to derive an appropriate formula.

Setting: Accredited community based comprehensive breast center with academic affiliation. Patients: We used a convenience sample of 80 consecutive women with breast cancer ranging in age from 19 to 85 who required breast surgery. Women with immediate breast reconstruction were excluded.

Main Outcome: OP prescribed and OP consumed.

Results: Pt were prescribed between 0 and 30 OP. 91% of patients consumed 5 or fewer OP, 46% consumed none. Of 1218 OP prescribed only 165 OP(13.5%) were taken. Median consumption was ZERO OP, IQR 0–1 OP. Accounting for age, pain score and narcotic history, patients requiring mastectomy consumed more OP (p < 0.001).

Conclusions: Following breast surgery, women required many fewer OP than were prescribed. These data support drastically reducing the standard post-operative OP prescription to no more than 5.

* NESS Non-Members
Objective(s): Previous retrospective studies reported reduced risk of common bile duct injury (CBDI) during cholecystectomy when intraoperative cholangiography (IOC) is used. However, studies have used bile duct reconstruction (BDR) to define CBDI, which may misclassify patients with hepato-pancreato-biliary or duodenal malignancy for whom BDR represents standard of care. We sought to 1) compare IOC performance and BDR incidence among cholecystectomy patients with benign or malignant disease; 2) examine whether IOC was associated with reduced risk of BDR in patients with benign disease; and 3) determine whether BDR was associated with increased mortality in patients with benign disease.

Design: Retrospective cohort study using 2004–2011 national Medicare claims data to perform multivariable regression and survival analysis.

Setting: Hospitalized care

Patients: Patients, >65 years, who underwent inpatient cholecystectomy.

Interventions: IOC during cholecystectomy.

Main Outcomes: BDR within 12 months of cholecystectomy; 12-month survival.

Results: 564,485 patients underwent inpatient cholecystectomy: 97.5% had benign disease. Compared to patients with benign disease, fewer patients with malignancy received IOC (11% vs. 35%), but more had BDR (11% vs. 0.4%). Among those with benign disease (N = 550,328), IOC was associated with increased odds of BDR (adjusted OR 1.18 [1.08–1.29]), and BDR was associated with increased hazard of death in 12 months (adjusted HR 1.64 [1.48–1.82]) (Figure).
Conclusions: Although fewer patients with malignancy received IOC, more had BDR suggesting that using BDR as a proxy for CBDI may introduce confounding by indication. These data do not demonstrate reduced risk of CBD injury when IOC was performed in patients receiving cholecystectomy for benign disease.

Design: The Nationwide Inpatient Sample was used to identify the annual number of bariatric procedures performed using ICD-9 codes. The Behavioral Risk Factor Surveillance System survey was used to determine the population of bariatric surgery eligible patients.

Setting: Nine U.S. Census Divisions.

Patients: The eligible population included those with BMI ≥ 40, or BMI ≥ 35 with diabetes.

Main Outcome Measures: Differential rates of Laparoscopic Roux-en-Y gastric bypass (LRYGB), laparoscopic sleeve gastrectomy (LSG), adjustable gastric bands and other primary bariatric procedures per 100k bariatric surgery eligible population.

Results: In 2012, 122,785 bariatric procedures were performed, representing a rate of 1096 procedures (range across divisions 803–1960) per 100 k of surgery qualified morbidly obese. LRYGB comprised 50% of all inpatient procedures, and was the most common operation in all divisions except East and West South Central, where LSG was more frequent. The national proportion of LSG was 40%. In 2013 137,410 bariatric surgeries were performed, representing an incidence rate of 1164 procedures (range 905–2157) per 100 k. The relative proportion of LRYGB fell to 39% overall, with an increase of LSG to 56% total. Only in the West North Central region did LRYGB remain the most common procedure; LSG prevailed in the remaining areas. New England had the largest increase in incident rate of LSG, from 491 in 2012 to 1023 per 100 k in 2013.

Conclusions: In 2013, LSG surpassed LRYGB as the most common bariatric procedure performed in the U.S. Long-term comparative effectiveness data is needed to determine the relative rates of sustained weight loss, resolution of comorbidities and long-term complications for LSG and LRYGB.

* NESS Non-Members
P17. Incidental Congenital Small Bowel Malrotation in the Adult Population: Review of Diagnostic and Treatment Strategies


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Objective: Congenital small bowel malrotation is considered a surgical emergency in the pediatric population regardless of symptomatology. Incidentally discovered malrotation has been noted in the adult population undergoing computed tomography (CT) scans of the abdomen. Our objective was to identify these patients and to evaluate current diagnostic and treatment strategies.

Design: Retrospective review.

Setting: Academic medical center.

Patients: Montage™ software used to identify adult patients with “malrotation”, “non-rotation”, or “volvulus” on CT scan of the abdomen.

Interventions: N/A.

Main Outcome Measures: CT scan reads and indication for the scan were reviewed. Surgical history and subsequent follow up with confirmatory study, defined as small bowel follow through (SBFT) or surgical exploration within 30 days of scan, was tracked.

Results: 84 patients were deemed suspicious for malrotation. 16 patients were excluded from analysis after review (10 for prior Ladd’s procedures, 6 for prior duodenal manipulation). 68 patients were analyzed; 38 (55.9%) obtained the CT scan for abdominal pain. Of these 38 patients, 17 (44.7%) underwent confirmatory study. In the 30 patients who had CT scan performed for another indication, 8 (26.7%) had a confirmatory study (p = 0.14). Of the 22 patients who underwent a confirmatory study, 5 patients had malrotation; 2 by SBFT, 3 by surgical exploration. Neither patient in the SBFT group underwent a subsequent surgery. Only 1 patient, who did not have a confirmatory study, subsequently required surgical exploration >30 days after CT scan secondary to continued symptoms.

Conclusion: The incidental finding of small bowel malrotation on CT scan leads to variable management strategies. Even in the setting of abdominal pain as the indication for CT, less than half of patients go on to a confirmatory study.

* NESS Non-Members
Objective: Centralization of pancreatic resections to high volume (HV) centers has been advocated to improve perioperative outcomes. Multiple publications document that minimally invasive pancreatic resections are underutilized nationally, even at HV centers. We investigated whether we could develop a program of minimally invasive distal pancreatectomy (MIDP) at our institution, which is not a HV center.


Setting: Intermediate volume center (<50 major pancreatic resections/year).

Patients: Consecutive sample. Pancreas neoplasia only.

Interventions: Open vs. MIDP.

Main Outcome Measures: Successful MIDP.

Results: The study group included 46 patients, 27 MIDP and 19 open procedures. The cohort included 30% neuroendocrine tumors, 35% cystic neoplasms, and 24% adenocarcinomas. There was no difference in age (63 vs 67), gender (59% vs 58% males), BMI (29.7 kg/m² vs 27.2 kg/m²), or diagnosis between the MIDP and open groups. The primary selection criteria for MIDP was longer tumor distance from the splenorenal vein confluence (5.1cm vs 1.3 cm, p < 0.001). Patients in the open group required pancreatic transection at the neck of the gland more often (74% vs 0%, P < 0.001), and had a higher rate of positive margin (32% vs. 0%, p < 0.003). There was no difference in lymph node harvest between groups. Conversion rate for MIDP was 15%. Postoperative complications (1 mortality, 6 fistulas, and 8 readmissions) showed no differences between the groups. MIDP had shorter length-of-stays (5.6 vs. 7.1 days, p < 0.05).

Conclusions: We demonstrate that MIDP can be applied safely outside HV centers. MIDP was not associated with increased perioperative morbidity, maintained sound oncologic principles, and offered shorter hospital stays. Our data compares favorably with publications from HV centers. Centralization of pancreatic surgery should not be based solely on case volume.
Objective: The safety and utility of advanced endoscopic procedures in the diagnosis and management of pancreatic cancer were investigated.

Design: A retrospective, single-institution contemporary cohort study.

Setting: A high-volume pancreatic cancer center and GI center of excellence.

Patients: Patients with pancreatic cancer diagnosed 2006–2012 at our institution.

Interventions: All patients had at least one cancer-related ERCP. Stents, brushings and other endoscopic procedures were documented.

Main Outcome Measures: 30-day complications, diagnostic sensitivity, and time to treatment.

Results: 503/968 (52.0%) of all pancreatic cancer patients had an in-house ERCP. 388 (77.1%) underwent endobiliary stenting at first ERCP (258 plastic, 130 metal), and 298 (59.3%) had common bile duct (CBD) brushings (diagnostic sensitivity = 54%). 37 (7.4%) experienced a 30-day complication. 210 (41.8%) received a second ERCP in a median time of 42 days (IQR 11, 33). 254 (50.5%) also received endoscopic ultrasound (EUS), 176 of whom had fine needle aspiration (FNA) of a mass (sensitivity = 77%). 242 (48.1%) first obtained a definitive diagnosis via endoscopy: 15 in 2006 vs. 59 in 2012 (p < 0.0001). Of 236 resected patients, 52.5% required an ERCP; median time to resection from prior ERCP was 18 days (IQR 11,31). In unresected patients who had ERCP before documented chemotherapy (n = 143), median time to chemotherapy was 41 days (IQR 22, 65).

* NESS Non-Members
Conclusions: Endoscopy is increasingly employed in the diagnosis and management of pancreatic cancer patients. Understanding its advantages and limitations is valuable for surgeons in a multidisciplinary environment. Careful communication can optimize decisions regarding stents, diagnostic procedures, and timing of treatment.
P20. **Surgeon Performed Ultrasound Is Highly Beneficial in the Post-Operative Surveillance of Thyroid Cancer Patients**

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**Objective:** This study examines the relative value of surgeon-performed ultrasound (SPUS).

**Design:** Retrospective review.

**Setting:** All patients operated on by a single endocrine surgeon 2006–2010 were followed annually with SPUS for 5 years.

**Patients:** 105 patients, 79 women, 26 men.

**Main Outcome Measures:** Sensitivity of SPUS was 56% for central compartment metastases, and 100% for lateral compartment disease. The negative predictive value of a normal surveillance SPUS was 98.7%.

**Results:** Mean primary tumor size was 2.7 cm. 22 patients had suspicion of lateral cervical lymph node metastases by SPUS prior to thyroidec-
tomy, and ultrasound-guided fine needle aspiration biopsy performed in all of them. 10 biopsies were benign, 11 biopsies were positive for papil-
lary cancer and 1 was non-diagnostic. At the initial operation, 23 patients had a central compartment lymph node dissection and 12 patients had a lateral compartment dissection. Pathology was papillary in 84, follicular in 20 and medullary in 2. 73 had Stage I, 8 Stage II, 22 Stage III, and 2 Stage IV disease. Recurrent disease was detected in 11 patients, 1 in the central compartment and 10 in the lateral compartment. Mean time to recurrence was 20.7 months. The initial test suggesting disease recur-
rence was physical exam in 2, rising thyroglobulin in 1, SPUS in 6, out-
side US in 1, and RIU in 1. After confirmatory biopsy, recurrent disease was treated operatively in 10 and with radio-iodine ablation in 1.

**Conclusions:** SPUS is highly sensitive for the pre-operative detection of thyroid cancer metastatic to the lateral neck, and was the most sensitive method for detecting recurrent disease. In the post-operative surveillance annual ultrasound by an endocrine surgeon improves care.

* NESS Non-Members
Objective: The current UICC/AJCC classification recommends at least 15 lymph nodes (LN) be examined to correctly stage gastric cancer (GC). To improve GC staging, a local multidisciplinary tumor board (MTB) initiative to educate physicians on the requirements of LN retrieval following gastrectomy for GC was undertaken.

Design: Prospective cohort study.

Setting: An academic tertiary healthcare organization.

Patients: Gastrectomies performed with curative intent for gastric adenocarcinoma between 2003 and 2016.

Interventions: Beginning March 2006, a standardized announcement was made at the weekly MTB reminding participants that 15 LN were required to adequately stage GC.

Main Outcome Measures: Number of LNs obtained and frequency of adequate LN retrieval

Results: Between 2003–2016 121 gastrectomies were performed for gastric adenocarcinoma. Before the MTB initiative, a mean 14 LN were obtained (range 1–32) and an adequate number of LN were obtained in 52% (13/25) of cases. Following the MTB initiative, the number of LN resected (mean 21, range 0–49, p < 0.05) and the frequency of adequate LN retrieval (75% (72/96), p < 0.05) were significantly increased. MTB attendees retrieved greater LN (mean 24 vs. 16, p < 0.05) and increased frequency of adequate LN (90%, 46/51 vs. 60%, 9/16, p < 0.05). Non-attendees did not exhibit any change LN retrieved.

Conclusions: In the United States, the number of LN resected varies regionally and is frequently inadequate. At our institution, improved GC staging was associated with a simple, cheap, and reproducible MTB initiative emphasizing the importance of evaluating >15 LN. Improved GC staging was achieved for those surgeons who utilized the system wide attention to this measure encouraged by the MTB. The emphasis provided by the MTB may be particularly useful for low volume surgeons and centers.

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**Objective:** Among patients with advanced melanoma, ultra-thick (≥6 mm) lesions are particularly high-risk for disease progression and treatment failure. Given such aggressive tumor biology, some surgeons have advocated less aggressive treatment approaches.

**Design:** Retrospective review of prospectively-maintained database.

**Setting:** Academic tertiary-care center.

**Patients:** Adult patients who underwent wide local excision (WLE) with/without sentinel lymph node biopsy (SLNB) for thick (≥4 mm) melanoma, June 2005 to June 2015.

**Interventions:** WLE, SLNB.

**Main Outcome Measures:** Disease recurrence.

**Results:** 80 patients were identified with thick melanoma (≥4 mm), of whom 44 (55.0%) had ultra-thick lesions (≥6 mm). Primary tumor thickness was 4–39 mm, with mean 8.2 mm. Fifty-one tumors were ulcerated (63.8%); 76 had mitotic rate ≥ 1 (95.0%). There was no significant difference between thick and ultra-thick lesions for tumor location, ulceration, mitotic rate, lymphovascular invasion, or positive SLNB. Ultra-thick patients underwent SLNB less frequently (50.0% versus 77.8%, p = 0.011). Disease recurrence was identified in 29 patients (36.3%): 10 local, 10 regional, 9 distant. Although overall survival was not significantly different (ultra-thick: 455 days versus thick: 677 days, p = 0.091), disease recurrence was detected more commonly in ultra-thick disease (n = 21, 47.7% versus n = 8, 22.2%; p = 0.018). Median time to recurrence was 300 days (range 34–1176). On multivariate analysis, ultra-thick tumor depth was independently associated with increased risk of both local (p = 0.043) and regional (p = 0.037) recurrence.

* NESS Non-Members
**Conclusions:** Ultra-thick melanoma often indicates aggressive tumor biology with higher rates of locoregional recurrence than thick lesions, lending itself to under-treatment. However, operative treatment is not futile, as durable locoregional control is still possible for many patients. Identifying those patients prospectively remains challenging. Clinical decision-making that considers patients’ treatment goals while balancing the desire for local control against aggressive tumor biology is paramount.
P23. **Mathematical Modeling of Serotonin-Induced Increases in Intestinal Mucosal Surface Area**

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**Objective:** Studies attempting to quantify intestinal mucosal growth typically report measurement of a single morphometric parameter, usually villus height, as a surrogate for the presumed changes in mucosal surface area. We hypothesized that using mathematical modeling based on multiple unique histologic measurements would provide accurate estimates of mucosal surface area that may differ from estimates based upon standard villus height measurement alone.

**Design:** Enhanced serotonin (5-HT) signaling stimulates mucosal growth in the murine small intestine. 5-HT signaling can be potentiated by targeting the serotonin reuptake transporter (SERT) responsible for 5-HT inactivation. Selective serotonin reuptake inhibitor (SSRI)-treated wild-type, SERT knockout (SERTKO) and wild-type (WT) C57Bl/6 mice were used for experiments. Distal ileal segments were obtained and paraffin sections H&E-stained. Villus height, villus width, crypt width and bowel diameter were used to calculate surface area enlargement factor (SEF) and mucosal surface area per millimeter of bowel (MSA).

**Setting:** Basic Science Laboratory.

**Participants:** Mice.

**Interventions:** Genetic knockout/pharmacologic inhibition of SERT.

**Main Outcome Measures:** Surface area enlargement factor, mucosal surface area.

**Results:** SEF and MSA were significantly increased for SERTKO and SSRI groups compared to WT. Villus height alone for SERTKO and SSRI was increased by 22% and 23% of WT, respectively, while increases in MSA via our mathematical model were 60% and 127% of WT, respectively (Figure 1).
Conclusions: Mathematical modeling provides a valuable tool for quantifying changes in intestinal mucosal surface area. This more comprehensive assessment of surface area does not appear to correlate linearly with single measurements of villus height alone.
Preoperative Systemic Inflammation Is a Crucial Risk Factor for the Development of Venous Thromboembolism Following Emergency Colon Resection

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Objective: Although venous thromboembolism (VTE) is one of the most serious complications facing postoperative surgical patients, little is known about the risk of VTE following non-trauma surgical emergencies (NTSE). This study investigated the risks and timing of postoperative VTE in patients requiring emergent colon resection (ECR).

Design: Population-based, retrospective cohort study using the American College of Surgeons National Surgical Quality Improvement Program (NSQIP) dataset to identify patients who underwent ECR from 2010–2012. The presence and magnitude of the inflammatory response before operation was stratified into four groups: no inflammation, systemic inflammatory response syndrome (SIRS), sepsis, and septic shock. VTE events were assessed by perioperative metrics and risk factors using adjusted logistic regression.

Setting: Acute care hospitals.

Patients: Emergent colon resections.

Interventions: N/A.

Main Outcome Measure: 30-day VTE.

Results: A total of 14,266 patients underwent ECR, 648 (4.5%) of whom developed VTE. Thirty-day VTE rates were significantly different (p < 0.0001) among the four inflammation groups, with increasing magnitude of preoperative inflammation associated with increasing probability of VTE (p < 0.0001). Adjusted odds ratios indicated that, compared to patients with no inflammation, the odds of VTE from SIRS was 1.39 (p = 0.0134), from sepsis was 1.60 (p < 0.0001), and from septic shock was 1.85 (p < 0.0001). Of the patients who developed VTE, 21% were diagnosed after discharge from the hospital.

* NESS Non-Members
Conclusions: Upregulation of the systemic inflammatory response is a significant contributor to high rates of VTE in patients undergoing ECR. The risk of VTE remains increased after hospital discharge; some traditional VTE risks may not be as significant in NTSE. These results reinforce the importance of VTE clinical awareness in NTSE, and indicate that extended thromboprophylaxis in the highest-risk patients may be warranted.
P25. What’s Missing in ICU Delirium Assessment? The Importance of CAM-Unable-to-Assess

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Objective: Unplanned extubation (UE) is a safety metric and contributes to ICU morbidity. Risk factors for UE include sedation level, restraint use and severity of illness. Delirium, an important contributor to patient outcomes, is assessed by CAM-ICU as positive or negative. More frequently we have identified that some ICU patients are unable to be assessed by CAM (CAM-UTA); however, it is unclear as to the significance of this category. This study explored the relationship of CAM-UTA and other risk factors for UE and their impact on patient outcomes. The purpose of this study was to determine the impact of CAM-UTA on UE.

Design: Retrospective case matched comparison study.

Setting: Surgical ICUs in a Level 1 Trauma center.

Patients: The medical records of patients who had UE from January 2009 to December 2013 were reviewed. Patients with planned extubation (PE) case matched for age, gender and ventilator length of stay, served as controls. 182 patients were included.

Main Outcome Measures: These included ICU LOS, hospital LOS, reintubation rates, discharge disposition and mortality.

Results: Risk factors for UE included CAM-UTA and restraint use (P < 0.01). UE vs. PE showed no differences in demographics, TBI, ICU LOS, or SOFA. Post-extubation CAM-UTA patients vs. CAM (–) were more likely to be reintubated within 48 hours, had higher mortality, longer ICU LOS (P < 0.01) and less discharge home (P < 0.05) compared to CAM (–) patients.

Conclusions: CAM-UTA is an important quality characteristic to follow in the ICU as it was associated with worse outcomes and the preventable complication of UE. It is unclear why patients are assessed as CAM-UTA, however, understanding this important metric may impact patient safety and quality of care.

* NESS Non-Members
Rothman Index Variability Predicts Clinical Deterioration and Rapid Response Team Activation

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Objective: Rothman Index (RI) incorporates 26 clinical variables covering vital signs, lab values, and nursing assessment into a global indicator of inpatient acuity. Sparse literature is available to describe overall utility in surgical patients or specifically address to what degree changes in RI reflect deterioration over time. Our aim is to evaluate if RI variability can predict rapid response team (RRT) activation in surgical patients.

Design: Retrospective cohort study. Electronic medical records were queried for all patients from three representative surgical wards from 2012–2015 (14,825 patient encounters).

Setting: Tertiary academic hospital.

Patients: Surgical patients on dedicated surgical wards during the study period were included for analysis. RI incorporates multiple nursing assessments; therefore, each patient who underwent RRT activation was matched to four randomly selected control patients who were present on the same ward during the same time period to minimize the effect of staff change.

Interventions: None.

Main Outcome Measures: The primary outcome measured is RRT activation.

Results: 217 patients underwent a RRT activation during the study period. RI variability was gauged by Maximum Minus Minimum RI (MMRI) and RI Standard Deviation (RISD) within a 24 hour period before RRT activation. MMRI predicted RRT with odds ratio (OR) 1.10 (95% CI 1.08, 1.12, p < 0.001) and area under receiver operating characteristic (AUROC) curve of 0.76 (95% CI 0.72, 0.79). RISD predicted RRT with OR 1.31 (95% CI 1.24, 1.38, p < 0.001) and AUROC of 0.74 (95% CI 0.70, 0.77).

Conclusions: RI variability predicted likelihood of rapid response activation. Future prospective studies are needed to determine feasibility of reallocating resources toward patients with unstable RI.

* NESS Non-Members
Objective: Compare perioperative outcomes between open distal pancreatectomy and minimally invasive alternatives in a national cohort.

Design: Retrospective cohort study.

Setting: 106 U.S. hospitals participating in the 2014 ACS NSQIP Targeted Pancreatectomy Dataset. This inaugural dataset contains detailed pancreatectomy-specific variables.

Participants: Adults undergoing primary distal pancreatectomy for benign or malignant etiology from Jan 1–Dec 31 2014. We excluded patients with disseminated cancers, emergent indications, misclassification of key variables, concurrent organ resection except splenectomy.

Interventions: Open, laparoscopic (LDP) or robotic distal pancreatectomy (RDP).

Main Outcome Measures: Perioperative morbidity, mortality, unplanned readmission and reoperation rates within 30 days.

Results: 1254 patients underwent DP: ODP = 599, LDP = 498, RDP = 157. The cohorts were comparable at baseline except the ODP cohort had more patients with neoadjuvant chemoradiation (p < 0.0001), and malignant indications (p < 0.0225). RDP had the longest median operative time of 234 minutes (ODP 206 vs LDP204, p < 0.0001), and shortest median hospital stay(8.08 d ODP vs 5.92 d LDP vs 5.67 d RDP, p < 0.0001). ODP had the highest rate of bleeding requiring transfusions (p < 0.0001), unadjusted rates of deep organ infection (p < 0.0328), and unadjusted readmission rates (19.7% ODP vs 13.7% vs 17.8%, p < 0.0238). There was no difference in adjusted readmission rates, rates
of postoperative percutaneous drainage, inpatient mortality or pancreatic fistula (ODP 16.2% vs LDP 18.3% vs RDP 21.15%, p = 0.3549), unadjusted reoperation rates (4.5% ODP vs 2.8% LDP vs 2.5% RDP, p = 0.2437). Logistic regression identified COPD, preoperative weight loss, postoperative DVT/PE, wound infections, and fistulas as predictors of readmission (OR 3.0, p = 0.0046, 2.3 p = 0.0079, 11.8 p < 0.0001, 10.9 p < 0.0001, 2.5 p < 0.0001, respectively).

**Conclusions:** Compared with open, RDP and LDP are associated with shorter hospital stay, without an increase in morbidity and mortality. All three had similar 30-day readmission rates. Post-operative DVT/PE and wound infections are the two strongest predictors of 30-day readmission.
Impact of Pathologic Complete Response to Neoadjuvant Treatment on Rectal Cancer Recurrence Rates

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Objective: Currently, the gold standard in the US when treating locally advanced rectal cancer is neo-adjuvant chemoradiation followed by surgical resection regardless of whether the patient has complete regression of the primary tumor. There is growing evidence that it is possible to closely observe patients who have a complete response (CR) after neo-adjuvant treatment. This abstract retrospectively reviews the outcomes of patients who were found to have a pathologic CR after surgical resection.

Design: Retrospective review of our prospectively maintained IRB approved data repository.

Setting: Tertiary Care Center.

Patients: All rectal cancer patients without baseline metastasis treated with neo-adjuvant chemoradiation followed by surgical resection at our center between January 2004 and February 2011 (n = 173) were included such that adequate follow-up was achieved.

Main Outcome Measures: Rates of distant metastatic and local recurrence were compared between patients with a pathologic CR and patients with residual disease in the postoperative pathologic specimen.

Results: Out of 36 patients with a pathologic CR, one patient (2.8%) developed distant metastatic disease during follow up (median duration: 61 months, no significant difference between groups; P = 0.14), compared to 25 patients in the residual carcinoma group (n = 137, 18.2%; Relative Risk [RR]:0.15; P = 0.06).

No local recurrence occurred in the complete remission group in contrast to 11 (8%) in the residual carcinoma group, corresponding to a Relative Risk of 0.16 (P = 0.20).

* NESS Non-Members
**Conclusions:** A pathologic complete response is associated with better disease-free survival, with clinically significant differences in local recurrence and distant metastatic disease rates. Although not statistically significant due to sample size limitations, the differences are sufficient to lend credence to the idea of observing patients who have a complete response after neoadjuvant therapy.
Objective: Randomized trials of non-operative management of inguinal hernias have noted similar quality of life and very low rates of incarceration among patients with unrepaired hernias. However, most elderly patients within these trials developed pain, prompting eventual surgical repair. Given the higher risks of both elective and emergent surgery in older patients, we sought to evaluate whether non-operative management of asymptomatic inguinal hernias is a cost-effective strategy in older patients.

Design: Cost-utility analysis using a Markov model.

Setting: Hypothetical cohort of men in United states.

Patients: Men aged 65–90 with single asymptomatic inguinal hernia.

Interventions: Non-operative management versus open elective repair.

Main Outcome Measures: Cost/quality-adjusted-life-year (QALY).

Results: With our base case assumptions, including reimbursement of $1965 per elective hernia repair (current Medicare reimbursement for ambulatory surgical center), we found that watchful waiting is the preferred strategy for men aged 65–71, and those aged over 84 with an asymptomatic groin hernia. In this model, we noted that for a 65-year old male, watchful waiting cost $29/QALY versus $141/QALY for elective repair. When the cost of elective repair exceeded $2500 (reimbursement for repair in an inpatient setting), it was no longer the preferred strategy for men of any age group. Likewise, if annual risk of developing pain from an asymptomatic hernia dropped below 3%, elective repair was not preferred for any age group. The model was sensitive to the risks of incarceration within the 65–70 year old age group, with annual risk of incarceration over 0.8% favoring primary elective repair.

Conclusions: Elective hernia repair for older men is a cost-effective strategy if the procedure is performed in an outpatient or ambulatory surgical clinic.
The National Rise of Primary Pancreatic Carcinoid Tumors: Comparison to Functional and Non-Functional Pancreatic Neuroendocrine Tumors (PNETs)


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Objective: To compare pancreatic carcinoid tumors to other functional and non-functional pancreatic neuroendocrine tumors.

Design: Retrospective cohort study.


Patients: Adults aged 18–90+ with primary pancreatic carcinoid, functional (insulinoma, glucagonoma, gastrinoma, somatostatinoma) and non-functional neuroendocrine tumors.

Interventions: None.

Main Outcome Measures: 5-year overall survival and hazard ratios.

Results: Of 10,752 patients, 84.7% were diagnosed with non-functional PNET and 12.7% with carcinoid. While the number of functional PNET has remained relatively constant, the numbers of non-functional and carcinoid tumors rose dramatically–36 carcinoid tumors reported in 2004 and 497 in 2013. Most patients were male (53.0%) who had significantly more non-functional tumors (53.7%) while females had more functional tumors (52.9%) (p = 0.0016). For all histologies, body/tail location was most common (42.8%). Carcinoid tumors underwent more resections than functional and non-functional tumors (68.5%, 64.5%, 54.5%, p < 0.0001). Carcinoid tumors were more likely to be well-differentiated (60.6%) than functional and non-functional tumors (41.3% vs. 40.3%, p < 0.0001). Overall 5-year survival was higher for carcinoid tumors (63.1%) compared to functional (58.3%) and non-functional (52.6%) tumors (logrank, p < 0.0001). For resected patients, 5-year survival was further enhanced for carcinoid tumors (89.2%), but comparable for functional and non-functional (76.6% and 78.7%) (logrank, p < 0.0001). On multivariate Cox regression of resected cohort, hazard ratios were significantly higher for patients with functional (HR 1.8) and non-functional (HR 1.5) tumors compared to carcinoid tumors (see Figure).

* NESS Non-Members
Conclusions: Primary pancreatic carcinoid tumors are increasingly diagnosed and demonstrate a survival advantage over other PNETs. Resection remains the standard of care.
Breast MRI: A Retrospective Review of the Utility and Pitfalls in Newly Diagnosed Breast Cancer

*Laura C. Lamb*¹², Kristen Zarfos², *Bethany Carr*²

¹University of Connecticut, Avon, CT; ²The Hospital of Central Connecticut, New Britain, CT

**Objective:** To determine whether a preoperative breast MRI can prevent women from returning to the operating room for additional surgical excisions.

**Design:** Single surgeon, single institution, retrospective analysis of women with newly diagnosed breast cancer.

**Setting:** Breast cancer accounts for 25% of female cancers. Breast cancer accounts for 450,000 deaths annually worldwide.

**Patients:** 96 patients had breast MRIs from December 2013 through December 2014.

**Interventions:** Each patient with newly diagnosed breast cancer underwent a preoperative bilateral breast MRI.

**Main Outcome Measures:** 1) Whether preoperative MRIs would change the planned procedure 2) Minimizing unnecessary biopsies 3) Minimizing re-operations.

**Results:** MRI’s correlation to pathology, the gold standard was 64% overall, while the correlation for ultrasound was 43% and 44% for mammography. As breast density increased, MRI’s correlation to pathology increased. For women with breast density of 25–50% there was a 27% correlation while for women with 51–75% density there was a 92% correlation. True positives were higher with the use of MRI with 42% of breast biopsies on MRI being positive for carcinoma. 38% patients had a change in operative plan based on their MRI findings.

**Conclusions:** MRI is a sensitive imaging modality which is most closely correlated to pathology. This led to 38% of patients having a change in their operative plan. Breast biopsies were more likely to result in findings of carcinoma when aided by MRI as well. We found that 42% of our breast biopsies of lesions found on MRI were positive as opposed to 25% nationally. The >50% breast density population in particular seems to benefit from the increased sensitivity of MRI as compared to ultrasound and mammography.

* NESS Non-Members
P32. **Calpain Inhibition Decreases Collagen Formation and Modulates Cytoskeletal Protein Expression in a Swine Model of Chronic Myocardial Ischemia**


* Brown University, Providence, RI

**Objective:** We hypothesized that moderate calpain inhibition (CI) would modulate collagen formation and cytoskeletal protein expression in the ischemic and non-ischemic myocardium of hypercholesterolemic swine.

**Methods:** Yorkshire swine were fed a high cholesterol diet for four weeks and underwent placement of an ameroid constrictor on the left circumflex artery. Three weeks later animals received either: no drug, high cholesterol control group (HCC; n = 8); low dose CI (0.12 mg/kg; LCI, n = 9); or high dose CI (0.25 mg/kg; HCl, n = 8). The high cholesterol diet and CI were continued for seven weeks, after which the pigs were euthanized and the left ventricular myocardium was harvested and analyzed via western blot and picrosirius red stain.

**Results:** In the ischemic and nonischemic myocardial tissue, there were significant decreases in the percentage of collagen present in the calpain-inhibited groups compared to the control. In the ischemic myocardial tissue, there were significant increases in six (of 11 cytoskeletal proteins tested) in the calpain-inhibited groups compared to the control. [Figure 2]. In the non-ischemic tissue, calpain inhibition had no effect on seven (of 11 proteins tested) and significantly decreased the expression of filamin, β Actin and β tubulin compared to the control group.

* NESS Non-Members
Conclusions: In the setting of hypercholesterolemia and chronic myocardial ischemia, calpain inhibition decreases collagen formation in the ischemic and nonischemic myocardial tissue. Calpain inhibition increases cytoskeletal protein expression in the ischemic myocardial tissue and has no effect or decreases the expression on cytoskeletal protein expression in the nonischemic tissue.
Objectives: A 1992 paper in the NEJM described regional variation in the utilization of breast conservation surgery (BCS) with the highest rate in New England and the lowest rates in the Southern US. The purpose of this study is to see whether this difference persists and to examine regional variation in breast reconstruction.

Design: Retrospective review of national database.

Setting: The NCDB is a joint project of the Commission on Cancer of the American College of Surgeons and the American Cancer Society and contains about 70% of the cancer cases in the United States.

Patients: All 761,498 women in the NCDB diagnosed with breast cancer from 2010 through 2013 who underwent definitive breast surgery, broken down by 9 geographic regions.

Outcome Measure: Rate of breast preservation and reconstruction.

Results: There are large differences in the rate of BCS with the highest in New England (69%) followed by Middle Atlantic (64%) and the lowest in East South Central (49%) followed by West South Central (50%), p < 0.001. Similarly for mastectomy patients, the rate of reconstruction varied with the highest in Middle Atlantic (44%) followed by New England (41%) and the lowest in East South Central (26%) followed by West South Central (27%), p < 0.001. These differences persisted in multivariable models adjusted for race, ethnicity, tumor size, nodal status, grade, histology, and molecular subtype. Compared to East South Central, the odds ratio for BCS in New England was 2.5 (95% CI 2.4–2.6), and the OR for reconstruction in Middle Atlantic was 2.4 (95% CI 2.3–2.5) and in New England was 1.8 (95% CI 1.7–1.9).

Conclusions: Regional differences in breast surgery have changed very little in 25 years.
Objective: To characterize the clinicopathologic behavior of pleomorphic invasive lobular carcinoma (PILC) and to identify unique genomic mutations associated with this lesion. PILC is an aggressive variant of classic lobular carcinoma (CILC) that presents at more advanced stages, greater risk of axillary metastasis, and higher mortality.

Design: Single-institution retrospective cohort study.

Setting: Academic medical center.

Patients: Retrospective chart review of lobular carcinomas cases from 2008 to 2013 was completed. Clinical and pathologic data were collected on 136 CILC and 25 PILC cases. Median follow-up was 30 months. To identify genes mutated in PILC targeted exome sequencing of 12 PILC tumors and their respective normal control was performed using the Beijing Genomics Institute (BGI) TumorCare panel, which included 1053 cancer associated genes.

Results: Our experience with PILC confirmed these patients present at advanced stages with regional metastasis warranting an AXLD, more likely to have a mastectomy, and had a higher fatality (CILC 3.7% vs PILC 20% P = 0.009). Our sequencing analysis identified genes that were repeatedly mutated in PILC including CDH1 (7 of 12 tumors), which encodes for E-cadherin, and PIK3CA (8 of 12 tumors), one of the most commonly mutated genes in cancer. Mutations in IRS2, DOT1L, PIK3R2 and ANKRD11 were detected in PILC but not CILC, which could represent PILC-specific genes.

Conclusions: PILC, an aggressive variant, presents at more advanced stages warranting more aggressive management. Identification of PILC-specific genes and signaling pathways could help target therapeutic interventions of PILC.
Objective: To study the impact of discharge disposition and its effects on readmission following lobectomy for lung cancer.


Setting: Tertiary care academic medical center.

Patients: All lung cancer patients who underwent lobectomy by board-certified thoracic surgeons who were living at home before surgery and discharged alive.

Interventions: Univariate and multivariate modeling of 72 patient factors on 90-day readmission and discharge disposition. Bootstrap techniques used to internally validate models.

Main Outcome Measures: 90-day unplanned readmission and discharge disposition from index operation (home vs. facility).

Results: 379 patients met inclusion criteria. The overall readmission rate was 11.6%. Prognostic factors for readmission on multivariate analysis were low preoperative hemoglobin (OR 3.18, \( p = 0.0011 \)), prior lobectomy (OR 3.69, \( p = 0.0283 \)), prior MI (OR 3.05, \( p = 0.0379 \)), and discharge to facility (OR 3.03, \( p = 0.0072 \)). Bootstrap analysis also identified perioperative ventilator use >48 hrs to be predictive of readmission (53.2%). Overall, 13.2% of patients were discharged to a facility. Prognostic factors for discharge to facility were age ≥80 (OR 4.80, \( p = 0.0014 \)), ICU stay (OR 3.46, \( p = 0.0015 \)), and UTI prior to discharge (OR 2.84, \( p = 0.0424 \)). Bootstrap analysis additionally identified ASA class 4 (50.7%) and history of diabetes (52.1%) as predictors. Bootstrap analysis excluded age 70–79 (44.9%) and antileukotriene use (49.0%) which were present in the initial model. Reason for readmission was not different between home and facility discharges.

Conclusions: Discharge to a facility is a significant predictor of 90-day unplanned readmission in patients undergoing lobectomy for lung cancer. Efforts to improve readmission rates should focus on close follow up of patients discharged to a facility.

* NESS Non-Members
P36. Timing of Post-Operative Pneumonia Affects Outcome
*Swathi B. Reddy, Kevin M. Schuster, Kimberly A. Davis
Yale New Haven Hospital, New Haven, CT

Objective: Postoperative pneumonia (PNA) occurring late in postoperatively may be distinct from early PNA and require different prevention and treatment strategies. We hypothesized that early and late PNA would have different outcomes.

Design: Review of the National Surgical Quality Improvement Program (NSQIP) dataset. Excluded patients had pre-op PNA, were mechanically ventilated preoperatively, were not extubated at surgery or developed ventilator associated PNA. Odds ratios for mortality, adjusting for known risk factors, were calculated for PNA occurring on each day. Early PNA was defined as occurring on postoperative days 2–5 and late on days 8–14 based on mortality trends.


Patients: 1,946,532 major elective general or vascular surgery patients.

Interventions: None.

Main Outcome Measures: Mortality and post-PNA length of stay (pLOS). pLOS did not include readmissions for PNA.

Results: 20,024 patients developed PNA with a mortality of 12.1% compared to 0.6% without PNA. Early PNA occurred more often in females and smokers, late PNA in patients with CHF and on steroids (all p < 0.05). Early PNA demonstrated lower mortality (10.9% vs. 15.7%, p < 0.001). This was true for the 53.5% of patients without pre-PNA complications (6.5% vs. 9.0%, p = 0.002) and those with at least one pre-PNA complication (15.9% vs. 19.4%, p < 0.001). pLOS was longer for late-PNA (16.4 days vs. 11.7 days, p < 0.0001). This relationship persisted irrespective of pre-PNA complications.

* NESS Non-Members
**Conclusions:** Postoperative PNA impacts patients variably across time independent of comorbidity and other complications, possibly representing several distinct entities. Research and quality improvement efforts should separate early and late PNA.
P37. **Benign Ultrasound-Guided Breast Core Biopsy – Is Excision Necessary?**


*Tufts Medical Center, Boston, MA*

**Objective:** Indications for surgical excision following benign US-guided core biopsy include imaging discordance, the presence of high-risk lesions such as ADH, inadequate pathologic specimen, poor targeting, or patient preference. The purpose of this study is to determine whether benign ultrasound-guided core biopsies, discordant but determined to be well-targeted by US at a multidisciplinary breast conference, still require excision.

**Design:** Retrospective chart review.

**Setting:** Tufts Medical Center outpatients.

**Patients:** All patients who underwent ultrasound-guided core breast biopsy followed by surgical excision performed between January 1, 2000 and December 31, 2013 at Tufts Medical Center.

**Interventions:** None.

**Main Outcome Measures:** The main outcome is how often does surgical excision result in either a diagnosis of malignancy or a high-risk lesion that subsequently changes patient management.

**Results:** A total of 76 cases were reviewed that resulted in a benign US-guided core biopsy followed by subsequent excision. Indications for surgical excision included the following: imaging discordance (53), atypia (10), inadequate tissue for diagnosis (2), poor targeting (1), phyllodes/intraductal papilloma (7) and patient preference (3). Out of the 53 lesions with imaging discordance, there were 4 cases of malignancy (3 invasive ductal carcinomas, 1 lymphoma). Additionally, out of the 53 lesions with imaging discordance, there were 5 resultant high-risk lesions on excision (3 atypia, 2 LCIS). Overall, a change in patient management occurred in 9 out of 53 lesions with imaging discordance (17%).

**Conclusions:** Lesions that appear discordant by imaging necessitate excision, as a large percentage of these lesions may be upgraded on excision to either a high-risk lesion or invasive malignancy.

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* NESS Non-Members
**P38. Can an Intestinal Fluid Shift Be a Predictor of Ischemic Injury?**


*Yale School of Medicine, Yale University, New Haven, CT*

**Objective:** To create an ex-vivo intestinal ischemic model to further understand intestinal transplantation outcomes, and to correlate fluid shift seen in ischemic injury with histopathological analysis.

**Design:** We procured intestinal segments from Male Sprague-Dawley rats and connected them to customized intestinal perfusion chambers that are part of a perfusion device. The lumens of both intestines were continuously perfused with a buffer solution containing 50 μM Fluorescein isothiocyanate-Inulin (non-absorbable fluorescent marker). Both intestines on the vascular side were perfused with the same buffer solution; however, the experimental arm solution was bubbled with 100% Nitrogen gas to mimic an ischemic environment. Intraluminal samples were collected at 30-minutes intervals to measure FITC-Inulin concentration using nanospectrofluorimeter. Intestinal segments were sent for histopathological analysis at the conclusion of the experiment.

**Setting:** Surgical Laboratory, Yale School of Medicine.

**Patients:** Rat model.

**Interventions:** The use of 100% Nitrogen bubbled solution surrounding the experimental arm to reproduce an ischemic injury to the intestinal tissue.

**Main Outcome Measures:** Decrease in Intraluminal FITC-Inulin concentration as a measure of fluid shift produced by and indicative of intestinal ischemia, and histopathological grading of intestinal ischemia using Chiu/Park scale following perfusion.

**Results:** There was a 50% decrease in FITC-Inulin concentration in the ischemic arm when compared to the control segment, indicating more fluid secretion stimulated by the ischemic environment. Histopathological analysis confirmed that the experimental arm was a grade 4 on the Chiu/Park scale compared to the control arm that was a grade 1.

**Conclusions:** FITC-Inulin concentration measurement is a reliable volume marker that measures intraluminal shift that occurs during ischemic injury. It provides with a real-time evaluation of intestinal viability that is confirmed by histopathological analysis.

* NESS Non-Members
Objective: The NCCN guidelines for melanoma currently recommend that patients with stage III sentinel node positive melanoma undergo PET/CT for baseline staging prior to offering completion lymph node dissection. The aim of this study is to evaluate how often PET/CT changes management in this patient population at Tufts Medical Center.

Design: Retrospective chart review.

Setting: Tufts Medical Center outpatients.

Patients: Adult patients who had sentinel node positive melanoma and underwent a PET CT prior to further intervention between 1/1/2000 and 12/31/2015.

Interventions: None.

Main Outcome Measures: The first outcome is how often PET/CT changed management, including preventing completion lymph node dissection or identifying metastatic disease. The second outcome is how often PET/CT resulted in additional diagnostic testing.

Results: Thirty patients met inclusion criteria (12 female, average age 60.6; 18 male, average age 63.6). PET/CT changed management in 0/30 patients (0%) and resulted in additional testing in 4/30 patients (13.3%), including additional imaging, specialist visits, and biopsies. All four patients underwent completion lymph node dissection. One of the four patients was identified as having early recurrence at a site seen on PET/CT that had been further investigated with ultrasound but not biopsied. The sensitivity and specificity of PET/CT in this population was 100% and 89.6%, respectively.

Conclusions: In patients with stage III sentinel node positive melanoma, PET/CT did not change management despite further testing in 13% of patients. While it has a high specificity and sensitivity, its utility should be investigated in more rigorous trials.
Objective: To evaluate patterns of OAC and antiplatelet use and their effect on outcomes in the geriatric trauma population who experience falls.

Design: Retrospective review of a Trauma Registry.

Setting: Level 1 Trauma Center.

Patients: Elderly patients (≥65) who had fallen from January 1, 2010 to December 31, 2014 were included.

Interventions: None.

Main Outcome Measures: Data collected included demographics, medication history at the time of fall, injury severity score, and outcomes such as length of stay and disposition.

Results: Approximately 2,950 patients met initial criteria of fall and elderly. Of these, 798 were on an OAC or antiplatelet drug. Two thirds of patients (537) were 80+ years of age, (mean =82.77, SD ± 8.68, range = 65–89+), 501 female, 297 male, and 92% (731) white. Inpatient mortality was 5% with an average LOS of 6.26 days (±4.6) and average ISS of 10.37 (±6.29). The most common isolated injuries were pelvic (43%), head (11%) and vertebral (8%). Approximately 23% of patients were taking only warfarin, 2% were taking only a newer OAC, 69% antiplatelet, and 6% a combination of an OAC and antiplatelet. From 2010 to 2014, the percentage of patients on a newer OAC at time of fall increased by 4%. Increased ISS was associated with increased OAC and antiplatelet drugs but this did not reach statistical significance.

Conclusions: There has been an increase in the prescription of OAC and antiplatelet drugs in the elderly population. ISS appears to increase with the number of OAC and antiplatelet medication used although not significantly. Further studies are needed to evaluate the role of this class of drugs in patient outcomes after falls.

* NESS Non-Members
Objective: Evaluate the outcomes of patients transferred to an adult burn center after receiving cardiopulmonary resuscitation (CPR).

Design: Retrospective chart review.

Setting: ABA-verified adult burn center.

Patients: Adult burn patients transferred from another hospital or from the field.

Interventions: Standard Burn Care.

Main outcome Measures: mortality at and after 48 hours.

Results: Burn patients are often transferred to dedicated burn centers for specialized care, and some have undergone CPR. These patients have a significantly higher mortality at 48 hours than those who have not. An IRB-approved review of burn transfer deaths from 2012 to 2015 reveals that of 36 burn transfers resulting in death, 15 occurred within 48 hours (“early”). Of these, 9 (60%) had undergone CPR prior to transfer. By comparison, of the 22 “late” deaths, only 1 (4.5%) had undergone pre-hospital CPR. Pre-hospital CPR is significantly associated with early death (p < .003). There were no significant differences between the groups with respect to age (p = 0.23) or TBSA (p =0.45); there was a significant association with inhalation injury (11 “early” vs 8 “late” patients; p = 0.045). Interestingly, 46.7% of the early deaths were transferred directly from the field, compared with 22.7% of late deaths (p = 0.07).

Conclusions: Patients who have undergone CPR prior to transfer are at high risk for death within 48 hours of transfer. The likelihood of a poor outcome, particularly with inhalation injury, must be communicated to the referring centers and patients’ families. Further aggregated study should be undertaken to refine transfer criteria for referring hospitals and first responders managing patients requiring CPR after burn injury.
Factors Suggesting General Surgery Board Passage: An 11 Year Review
Paul H. Kispert, *Ryland S. Stucke, Kari Rosenkranz
Dartmouth, Lebanon, NH

Objective: ACGME requirements state that General Surgery Residency programs must achieve minimum first time pass rates on the ABS QE (written) and CE (oral) examinations of 65% over 5 year periods. We sought to identify factors contributing to board passage rates on the QE and CE.

Design: Retrospective observational study of QE and CE results from 2004–2015.

Setting: General Surgery Residency at an academic medical center.

Residents: General surgery residents sitting for the board examinations.

Intervention: None.

Main Outcome Measure: First time pass rate on QE and CE.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number</th>
<th>First Time Pass CE and QE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>30/40</td>
<td>75%</td>
</tr>
<tr>
<td>Career Choice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>1/6</td>
<td>17%</td>
</tr>
<tr>
<td>CT/Vascular/Thoracic</td>
<td>7/9</td>
<td>78%</td>
</tr>
<tr>
<td>General Surgery</td>
<td>22/25</td>
<td>88%</td>
</tr>
<tr>
<td>Resident Characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Categorical</td>
<td>26/30</td>
<td>87%</td>
</tr>
<tr>
<td>Preliminary/Transfer</td>
<td>4/10</td>
<td>40%</td>
</tr>
<tr>
<td>ABSITE (5th year scores)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Correct ≤70%</td>
<td>10/15</td>
<td>67%</td>
</tr>
<tr>
<td>&gt;70%</td>
<td>20/25</td>
<td>80%</td>
</tr>
<tr>
<td>National Percentile ≤30%</td>
<td>8/13</td>
<td>62%</td>
</tr>
<tr>
<td>&gt;30%</td>
<td>22/27</td>
<td>81%</td>
</tr>
</tbody>
</table>

* NESS Non-Members
Conclusions: Overall first time board passage rate over 11 years was 75%. Ultimate passage rate was 97% with repeated attempts. Residents pursuing a career in plastic surgery were less likely to pass the general surgery boards on the first attempt. Residents hired through the NRMP match had superior board passage rates compared to those hired after a preliminary year or who transferred from other programs. ABSITE scores ≤ 30th percentile nationally in the PGY-5 year had first time QE and CE failure rates that were double those of residents scoring >30th percentile (38% vs 19% failure). We postulate that careful recruitment to maximize resident retention and minimize replacement, selection of residents with General Surgery interests, and good ABSITE performance will help maximize first time QE and CE board passage rates.
P43. Bone Mineral Density Measurements As Predictors of Injury Patterns in Elderly Trauma Patients

*Ian Schlieder, *Michael Kelleher, Bishwajit Bhattacharya, Adrian Maung, Kimberly Davis, Kevin Schuster
Yale University, New Haven, CT

**Objective:** Bone mineral density (BMD), assessed with standard CT, will predict fractures remote from the cervical spine and may assist with decisions regarding additional imaging.

**Design:** Trauma registry review (January 2011–December 2014). Trauma patients aged 65 or greater with a fall mechanism who underwent CT scanning of the head, neck, abdomen and pelvis were included.

**Setting:** Urban, academic level 1 trauma center.

**Patients:** 378 patients, mean age of 82 years (SD 8.7), 171 males. Mean Injury Severity Score was 10.3 (SD 6.9). Mean LOS was 6.2 days and ICU admission was required in 132 patients (35%).

**Main Outcome Measures:** Hounsfield units were recorded at the C7 (C7HU) and L3 (L3HU) levels based off of 1.25mm axial images. BMDs were compared with fracture incidence at remote sites. Morbidity, mortality, length of stay were recorded.

**Results:** Low C7HU were associated with humerus, hip, pelvic and lumbar fractures while low L3HU were associated with hip and thoracic fractures (table). There were no significant relationships between C7HU or L3HU and outcomes including mortality. Cervical spine fracture was not associated with other injuries including other spine fractures, but was negatively correlated with hip fracture. In multivariable analysis a low C7HU (p = 0.030) but not C-spine fracture (p = 0.0599) was associated with lumbar spine fracture. Above 300 C7HU or 200 L3HU only 5 (1.3%) patients had remote fractures.

**Conclusions:** In elderly trauma patients, with even minor injury mechanisms, low C7HU not the presence of c-spine fracture should prompt careful consideration for further spine imaging, high values are reassuring.

* NESS Non-Members
Objective: The name of Charles Locke Scudder (CLS) is memorialized by the “Scudder Oration on Trauma” delivered annually at the American College of Surgeons (ACS) Clinical Congress. This investigation sought to document the remarkable life and career of CLS.

Methods: Review of the numerous publications of CLS, other publications related to CLS or his family, and archival material at the Countway Library. Communications with the granddaughter of CLS, and review of family archival material.

Results: CLS grew up in western Massachusetts (attending the same school and church as the younger WEB DuBois), graduated from Yale and Harvard Medical School, and practiced at the Massachusetts General Hospital. He worked closely with Arthur Cabot, Collins Warren, Harvey Cushing, Amory Codman, and Fred Cotton, and married a daughter of the first President of Smith College. CLS and two of his wife’s brothers were active NESS members. In 1900 he first published The Treatment of Fractures, which became a standard textbook for two generations. CLS made important contributions to the literature not only for skeletal and visceral trauma but also for other acute surgery, gastric surgery, congenital pyloric stenosis, and maxillofacial surgery. Most of his 150 publications were single-author, but CLS also led collaborative committees on fracture management for the ACS, NESS, and Massachusetts Medical Society. The current ACS Committee on Trauma (COT) preserves many features he established as Chairman from 1922–1933.

Conclusions: CLS personifies the New England surgical tradition that provided leadership during the formative years of the ACS and a foundation for its COT. Elucidating his biography supports his continued recognition by the ACS, and appropriately celebrates the NESS Centennial.
Panel – Credentialing Surgeons in the Era of Volume/Outcome Research

Plaza Ballroom AB
10:40 AM – 12:00 PM

Moderator: Richard S. Swanson

Faculty:
Summary of Current Volume/Outcome Relationships
John Birkmeyer
Chief Academic Officer, Dartmouth-Hitchcock Health

Credentialing for 22 Years at a Large Volume Hospital
Michael J. Zinner
Former Chairman of Surgery at Brigham & Women’s Hospital

Credentialing at a Small Volume Hospital
Scott H. Kurtzman
Chairman, Department of Surgery, Waterbury Hospital

Credentialing in Two Different Boston Hospitals
Gerard Doherty
Chairman of Surgery at Boston Medical Center & Future Chairman of Surgery of Brigham & Women’s Hospital

Credentialing at Dartmouth
John D. Birkmeyer
Chief Academic Officer, Dartmouth-Hitchcock Health

Panel Question & Answer
12:00 PM  FREE AFTERNOON

6:15 PM  CENTENNIAL VIDEO PREMIERE
  Black Tie Preferred
  Amphitheater (World Trade Center)

7:00 PM  PRESIDENT’S RECEPTION & DINNER
  Black Tie Preferred

  Reception: Harborview Ballroom Foyer
  (World Trade Center)

  Dinner: Harborview Ballroom
  (World Trade Center)
SUNDAY, SEPTEMBER 18, 2016

7:00 AM – 11:00 AM   REGISTRATION
                      Plaza Ballroom Foyer

7:00 AM – 10:00 AM   EXHIBIT HALL HOURS
                      Plaza Ballroom C

7:00 AM – 10:30 AM   SPEAKER READY ROOM
                      Plaza Ballroom Foyer

7:00 AM – 8:00 AM    CONTINENTAL BREAKFAST
                      Plaza Ballroom C

7:30 AM – 8:15 AM    ANNUAL BUSINESS MEETING
                      (MEMBERS ONLY)
                      Plaza Ballroom AB


1Massachusetts General Hospital, Harvard Medical School, Boston, MA; 2Boston Medical Center, Boston, MA; 3Baystate Medical Center, Boston, MA; 4Yale School of Medicine, New Haven, CT; 5Beth Israel Deaconess Medical Center, Boston, MA; 6Brigham and Women’s Hospital, Boston, MA; 7UMass Memorial Medical Center, Boston, MA; 8Hartford Hospital, Hartford, CT; 9North Shore Medical Center, Salem, MA; 10Tufts Medical Center, Boston, MA

**Objective:** To evaluate the safety of selective non-operative management (SNOM) of abdominal gunshot wounds (aGSW) in patients, who are hemodynamically stable, clinically evaluable, and without peritoneal signs on admission.

**Design:** Retrospective multicenter study (1996–2015).
Setting: Ten Level I and II trauma centers in New England.

Patients: Patients who had an ED thoracotomy, obviously tangential aGSW, died within 60 minutes from arrival, or were younger than 16 years of age were excluded. Failure of SNOM was defined by a clear statement in the records or a laparotomy after 2 hours from hospital arrival.

Main Outcome Measures: Failure of SNOM, hospital length of stay, non-therapeutic laparotomies, complications, and mortality.

Results: Of 922 patients, 707 (77%) received an immediate laparotomy and 215 (23%) were managed with SNOM. Compared to patients with immediate laparotomy, those with SNOM had a lower ISS (17 vs. 9.9, p < 0.05), lower incidence of complications (34% vs. 8%, p < 0.05) and mortality (5.2% vs. 0.5%, p < 0.05), and a shorter ICU and hospital stay (4.5/13.7 vs. 0.8/4.2 respectively, p < 0.05). One SNOM patient died after three days, due to a GSW to the head. Eighteen patients with SNOM failure underwent a delayed laparotomy up to two days following admission. No significant difference was noted in the rate of non-therapeutic laparotomies (14.7% vs. 5.6%, p = 0.49). Nine of them experienced complications, presumably unrelated to the delay, and none died.

<table>
<thead>
<tr>
<th>Management of aGSW Based on the Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate Laparotomy</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>Anterior Abdomen (n = 654*)</td>
</tr>
<tr>
<td>Posterior Abdomen (n = 264*)</td>
</tr>
<tr>
<td>All aGSW (n = 922)</td>
</tr>
</tbody>
</table>

Conclusions: SNOM of aGSW was offered frequently and successfully in this multicenter study. What used to be heresy, has become an acceptable standard of care.
The Surgeon As the Second Victim? Results of the Boston Intraoperative Adverse Events Surgeons; Attitude (BISA) Study
Massachusetts General Hospital, Boston, MA

Objective: An intraoperative adverse event (iAE) is often directly attributable to the surgeon’s technical error and/or suboptimal intraoperative judgment. We aimed to examine the psychological impact of iAEs on surgeons as well as surgeons’ attitude regarding iAE reporting.

Design: Cross-sectional survey.

Setting/Main Outcome Measures: We conducted a web-based survey of all surgeons at three major teaching hospitals of the same university. The 29-item questionnaire was developed using a systematic closed and open approach focused on assessing the surgeons’ 1) personal account of iAE incidence, 2) emotional response to iAEs, 3) available support systems and 4) perspective regarding the barriers to iAE reporting.

Results: The response rate was 44.8% (n = 126). The mean respondents’ age was 49 years, 77% were male, and 83% performed >150 procedures/year. Over the last year, 32% recalled 1 iAE, 39% 2–5 iAEs, and 9% >6 iAEs. The emotional toll of iAEs was significant, with 84% of respondents reporting a combination of anxiety (66%), guilt (60%), sadness (52%), shame/embarrassment (42%) and anger (29%). Colleagues constituted the most helpful support system (42%), rather than friends or family; a few surgeons needed psychological therapy/counseling. Regarding reporting, 26% preferred not to see their individual iAE rates, while 38% wanted it reported in comparison to their aggregate colleagues’ rate. The most common barriers to reporting iAEs were fear of litigation (50%), lack of a standardized reporting system (49%), and the absence of a clear iAE definition (48%).

Conclusion: iAEs occur often, have a significant negative impact on surgeons’ wellbeing, and barriers to transparency are fear of litigation and absence of a well-defined reporting system. Efforts should be made to support surgeons and standardize reporting when iAEs occur.

* NESS Non-Members
Safety of retrievable inferior vena cava filter placements in high risk bariatric surgery patients


1Brown University, Providence, RI; 2Singapore National University, Singapore; 3Massachusetts General Hospital, Boston, MA; 4Ochsner Health Center, Kenner, LA

Objective: To assess the safety of retrievable inferior vena cava filter placements (IVCf) in high risk bariatric surgery patients.

Design: Retrospective cohort.

Setting: Single center, inpatient and outpatient.

Patients: Patients with BMI > 50, history of thrombo-embolic events, hyper-coagulable conditions and low mobility predisposing factors were defined as high risk and included.

Interventions: 73% of patients received laparoscopic gastric bypass, 16.6% laparoscopic gastric banding, 10.4% laparoscopic sleeve gastrectomy. All patients received retrievable IVCf placement, preoperative heparin, postoperative enoxaparin for 4 weeks.

Main Outcome Measures: Success in filter removal, complications, failure to follow-up.

Results: 49 patients, 36 females and 13 males were reviewed. Mean age was 48, mean BMI was 53. 54.1% of the patients received preoperative IVCf for BMI > 50 (26), 27.2% for personal history of DVT/PE (13), 6.2% for family history of DVT/PE (3), 8.3% for hyper-coagulable state without prior DVT/PE (4), 4.2% for low mobility (2). Mean duration of filter placement was 92 days. In this population 1 patient had a failed IVCf placement, 1 had a clinically insignificant pulmonary embolism. 27% of patients (13) had blood clot on IVCf pathology report at removal. 98% of filters (47/48) were successfully removed with no complications, 1 patient did not return for follow-up.
**Conclusions:** In our study, retrievable IVCf placement in bariatric surgery patients at highest risk for DVT/PE appears to be safe and protective against thrombotic events. Although the literature suggests most retrievable IVCf are often not explanted as planned, nearly all of our patients underwent planned IVCf retrieval post-operatively. Our study suggests these patients can benefit from the protective effects of the filter while avoiding long-term complications by undergoing successful planned interval IVCf removal.
**Objective:** We hypothesized that a negative FAST scan in conjunction with a negative urine dip and urinalysis (UA) for blood could identify adult blunt trauma patients without intra-abdominal injury.

**Design:** Retrospective review.

**Setting:** Level 1 trauma center.

**Patients:** Adult blunt trauma patients who underwent CT of the abdomen and pelvis.

**Interventions:** None.

**Main Outcome Measures:** Patient demographics, FAST scan results, urine tests for blood, and injuries. IAI was defined as any intra-abdominal solid organ, hollow viscus, or vascular injury. Actionable IAI was defined as any grade III or IV splenic, hepatic, or renal injury, or any other solid organ, hollow viscus or vascular injury.

**Results:** 900 patients’ records were reviewed; 894 (99.3%) underwent FAST. 60 patients (6.7%) had a positive FAST. 128 (14.3%) patients had an IAI and 74 (8.3%) had an actionable IAI. 37 (4.1%) patients required intervention. There were 121 patients with negative FAST, negative UA and negative urine dip. The negative predictive value (NPV) for no IAI with negative FAST, negative UA and negative dip was 96.1% (91.1–98.7%, 95% CI) and the sensitivity was 95.9% (90.6–98.6%). The NPV for no actionable IAI with negative FAST, negative UA and negative dip was 98.7% (92.7–99.97%) and the sensitivity was 99.2% (95.5–99.98%). The NPV for no IAI requiring intervention with negative FAST, negative UA and negative dip was 97.3% (85.8–99.9%) and the sensitivity was 99.2% (95.5–99.98%). 1 patient with an IAI required an intervention and had a negative FAST, UA and urine dip.

**Conclusions:** Urine tests negative for blood in conjunction with a negative FAST can assist in predicting the absence of IAI at time of blunt trauma presentation.

* NESS Non-Members
**Brief 14.** Risk Factors for Re-Insertion of Urinary Catheter Following Early Removal in Thoracic Surgical Patients

*John Young, *Travis Geraci, David Harrington, William Cioffi, Thomas Ng

*Department of Surgery, Alpert Medical School of Brown University, Providence, RI*

**Objective:** To reduce the incidence of urinary tract infection (UTI), Surgical Care Improvement Project (SCIP)-9 mandates the removal of urinary catheter within 48 hours postoperatively. Patients with epidural analgesia are not exempted from SCIP-9. We sought to determine the urinary catheter re-insertion rate after early removal in patients undergoing thoracic surgery with thoracic epidural analgesia, and to determine the factors that are associated with re-insertion.

**Design:** Prospective cohort observational study.

**Setting:** Tertiary-care/Academic Hospital.

**Patients:** Consecutive patients undergoing major pulmonary or esophageal resection with thoracic epidural analgesia over a two year period. Excluded are patients with chronic indwelling catheter, patients with urostomy, and patients needing strict urine output monitoring in the critical care setting.

**Interventions:** SCIP-9, early removal of urinary catheter, within 48 hours postoperatively.

**Main Outcome Measures:** Urinary catheter re-insertion rate, complications of catheter re-insertion, UTI rate, rate of discharge with urinary catheter.

**Results:** There were 288 patients evaluated, 13 met exclusion criteria and 275 were included with 60/275 (21.8%) requiring re-insertion of urinary catheter. Median catheter days was significantly longer in the re-insertion group (median 5 vs 2 days, p < 0.001). There was no difference in the UTI rate between patients without re-insertion, 1/215 (0.5%) vs those requiring re-insertion, 1/60 (1.7%); p = 0.389. Urethral trauma during re-insertion was seen in 1/60 (1.7%). After re-insertion, discharge with urinary catheter was required in 4/60 (6.7%). Multiple logistic regression analysis found male gender, lower Body-Mass Index, presence of benign prostatic hypertrophy and esophagectomy to be independent risk factors associated with catheter re-insertion.

* NESS Non-Members
Conclusions: When applying SCIP-9 to patients undergoing thoracic procedures with thoracic epidural analgesia, consideration to delayed removal of urinary catheter may be warranted in patients with multiple risk factors for re-insertion.
Brief 15. **Effects of Use of a Self-Directed Question Bank on ABSITE Performance**

*Molly J. Douglas, *Jaswin S. Sawhney

*Maine Medical Center, Portland, ME*

**Objective:** To explore whether use of a commercial review question bank is correlated with ABSITE score improvement in a general surgery residency program.

**Design:** A time series educational study.

**Setting:** A general surgery residency program in a hybrid community-academic setting.

**Participants:** Nineteen of our program’s 27 general surgery residents, PGY1 through PGY5, participated in use of the question bank out. Excluding the PGY1s who did not take the 2015 ABSITE, thirteen residents were included in the final analysis.

**Interventions:** Four months before the 2016 ABSITE, a commercial ABSITE review question bank was made available to residents via an institutional membership. Participation was voluntary. Occasional quizzes totaling <250 questions and one full length mock-ABSITE were “assigned” but also optional, and the majority of question bank use was self-directed.

**Main Outcome Measure(s):** Number of question bank questions used, change in ABSITE scores from 2015 to 2016.

**Results:** There was a positive trend of increased percent correct on the ABSITE with increased usage of the question bank.

**Conclusions:** Prior studies have examined reading curricula, scheduled practice tests and other methods to improve ABSITE scores, but to our knowledge none have examined the utility of question banks which allow ongoing self-directed practice. While further study examining larger groups of residents are needed to help determine the significance of the above trend, our results suggest that question bank use shows promise in improving ABSITE performance.

*NESS Non-Members*
9:10 AM – 9:55 AM  32ND ANNUAL SAMUEL JASON MIXTER LECTURE
Plaza Ballroom AB
The Century of the System
Atul A. Gawande
Brigham & Women’s Hospital

9:55 AM – 10:00 AM  INTRODUCTION OF PRESIDENT
Plaza Ballroom AB
Richard J. Barth, Jr.

10:00 AM – 11:00 AM  PRESIDENTIAL ADDRESS
Plaza Ballroom AB
Its Been an Honor and Privilege
Michael J. Zinner

11:00 AM  ADJOURN
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<td>Christina Wai</td>
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<td>Heath Walden</td>
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<td>B. Marie Ward</td>
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<td>Joel S. Weissman</td>
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<td>Brian Wengerter</td>
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<td>Giles F. Whalen</td>
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<td>Rickesha L. Wilson</td>
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<td>Jennifer Y. Wo</td>
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<td>Kaitlyn E. Wong</td>
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<td>Emiko Yamada</td>
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<td>Lihua Julie Zhu</td>
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<td>Sha Zhu</td>
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<tr>
<td>Asha Zimmerman</td>
<td>P6</td>
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</table>
IS YOUR NESS MEMBERSHIP INFORMATION CURRENT?

For Example: Do you have a new e-mail address? Do you have a new address or phone number? Please let us know so that your NESS records stay current, and that all important updates and news reach you.

PLEASE PRINT

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E-mail Address

OFFICE ADDRESS

Institution

Street

City | State | Zip | Country

Office Phone | Office Fax

HOME ADDRESS

Street

City | State | Zip | Country

Home Phone | Home Fax

I prefer to receive my mailings at (please circle one): HOME  OFFICE

You may return this completed form one of three ways:

MAIL: NESS Membership Department
500 Cummings Center, Suite 4550
Beverly, MA 01915

E-Mail: admin@nesurgical.org

FAX: 978-524-0498

REGISTRATION DESK:
Just drop this form off at the Registration Desk at the 2016 Annual Meeting in Boston, Massachusetts.
**SCHEDULE AT A GLANCE**

**FRIDAY, SEPTEMBER 16**

1:00PM – 2:30PM  Scientific Session I  Plaza Ballroom AB
2:30PM – 3:00PM  Coffee Break  Plaza Ballroom C
   *Visit Posters & Exhibits*
3:00PM – 5:00PM  Scientific Session II  Plaza Ballroom AB
5:00PM – 5:45PM  State Caucus Meetings  See Page 92 & On-Site Signage
6:00PM – 7:00PM  Welcome Reception  Lighthouse Ballroom

**SATURDAY, SEPTEMBER 17**

7:00AM – 8:00AM  Continental Breakfast  Plaza Ballroom C
7:00AM – 7:45AM  Specialty Group Breakfasts  Seaport A, Seaport B
7:45AM – 8:40AM  Scientific Session III  Plaza Ballroom AB
8:40AM – 8:55AM  Introduction of New Members  Plaza Ballroom AB
8:55AM – 10:10AM  Scientific Session IV  Plaza Ballroom AB
10:10AM – 10:40AM  Coffee Break with Poster Session  Plaza Ballroom AB
   *Visit Exhibits*
10:40AM – 12:00PM  Panel Discussion  Credentialing Surgeons in the Era of Volume/Outcome Research  Plaza Ballroom AB
6:15PM  Centennial Video Premiere  Amphitheater (World Trade Center)
7:00PM  President’s Reception & Dinner  Includes the Conferment of the Nathan Smith Award to H. David Crombie (Award Sponsored by the NESS Scholars Foundation)  Harborview Foyer & Harborview Ballroom (World Trade Center)

**SUNDAY, SEPTEMBER 18**

7:00AM – 8:00AM  Continental Breakfast  Plaza Ballroom C
7:30AM – 8:15AM  Annual Business Meeting  Plaza Ballroom AB
   *Members Only*
8:15AM – 9:10AM  Scientific Session V  Plaza Ballroom AB
9:10AM – 9:55AM  32nd Annual Samuel Jason Mixter Lecture  Plaza Ballroom AB
   Atul A. Gawande  The Century of the System
9:55AM – 10:00AM  Introduction of President Richard J. Barth, Jr.  Plaza Ballroom AB
10:00AM – 11:00AM  Presidential Address  Plaza Ballroom AB
   Michael J. Zinner  It’s Been an Honor and a Privilege