THE UNIVERSITY OF CHICAGO | Biological Sciences Division

MSTS in the 20th Century: From Club to Society

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September 13, 2024

Disclosures

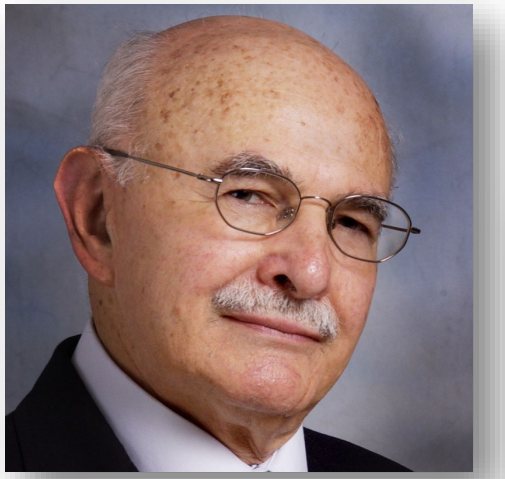
- I am the historian for the AOA and was the inaugural MSTS historian
- I'm not a founder of the MSTS!
- I cannot type or create a PowerPoint
- I have had more arthroscopies than I've done
- I have never used an EMR
- I only have one degree - MD

Historical Background of Society: 1965-1975

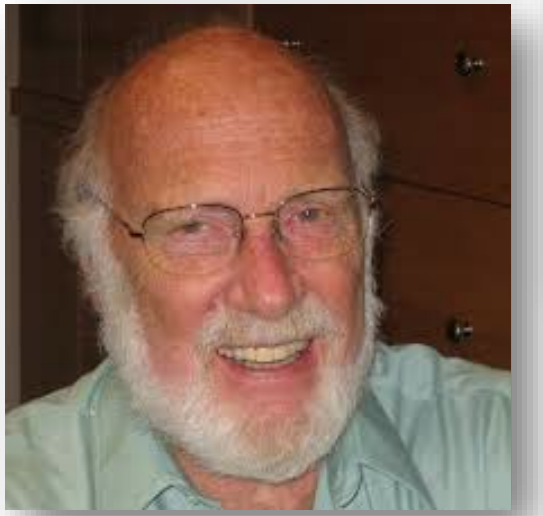
- World of surgery benefited from remarkable new technical advances
  - » Organ transplantation
  - » Cardiac surgery
  - » Radical cancer surgery
    - » Radical mastectomy
    - » Radical amputation
  - » Radiation oncology and medical oncology were not yet developed for solid tumors

Beginnings of the MSTS

- In Boston (1970-1975) there were three principals
  - » Mankin arrives at MGH in 1972
  - » Watts and Jaffe are at BCH
    - » Watts is a pediatric orthopaedic surgeon
    - » Jaffe is a pediatric oncologist







Beginnings of the MSTS

- Ted Kennedy's son has a periosteal osteosarcoma
- Watts starts to do limb salvage in selected cases
- Watts and Mankin in competition
- 1976 Mankin compiles "list of self professed orthopaedic oncologists" and asks Watts to invite to Boston

Watts and Jaffe Collaborate at BCH

- They developed pre-operative chemotherapy and limb salvage in some selected cases in children
- They developed a therapeutic triad and multi-disciplinary care of osteosarcoma and Ewing's sarcoma
- Marcove and Rosen are doing the same in parallel at MSK

First MSTS Meeting – May 5-6, 1977 in Boston

- 17 participants "in the room"

18 Co-Founders of the MSTS	
Bonfiglio	Marcove
Bovill	Mindell
Campbell	Mnaymneh
Enneking*	Murray
Jaffe	Neff*
Lewis*	Pritchard
Makley	Sim
Mankin	Springfield*
McMaster	Watts

MSTS Agenda First Half Day - GCT

- Resection with osteoarticular allograft
- Curettage and autogenous cancellous bone graft
- Resection with autograft fibula
- Cryosurgery

- Constant interruptions especially of Marcove
- There was no consensus and they recommended “individual care”



MSTS Agenda Second Half Day: Ewing's Sarcoma & Osteosarcoma

- Jaffe discussed a multi-disciplinary treatment of Ewing's sarcoma
- Springfield on behalf of Enneking
  - » Hip disarticulation versus above knee amputation for osteosarcoma of the distal femur
- Consensus was above knee amputation
- No one proposed limb salvage



Nighttime meeting at Harvard Club hosted by Mankin

- The “club” should continue to meet but without a formal organization
- Vigorous and aggressive discussion of content
- Murray nicknames MSTS the “Piranha Club”
- Sim creates picture



Images/photos courtesy F. Sim

Highlights of Early History of MSTS – 1976-1979

- 1st meetings of “invitational bone tumor group”
  - » Boston, Rochester and Houston
- Host was de facto president who was also founder
- No organizational structure, dues and expenses borne by host
- Besides education of members, multi-institutional studies became a focus

Highlights of Early History of MSTS – 1980-1985

- MSTS became official name
  - » ? Origin of the logo
- First attempts of structure, incorporation, by-laws and dues
- Membership issues/decisions become prominent
- First thoughts about fellowship guidelines

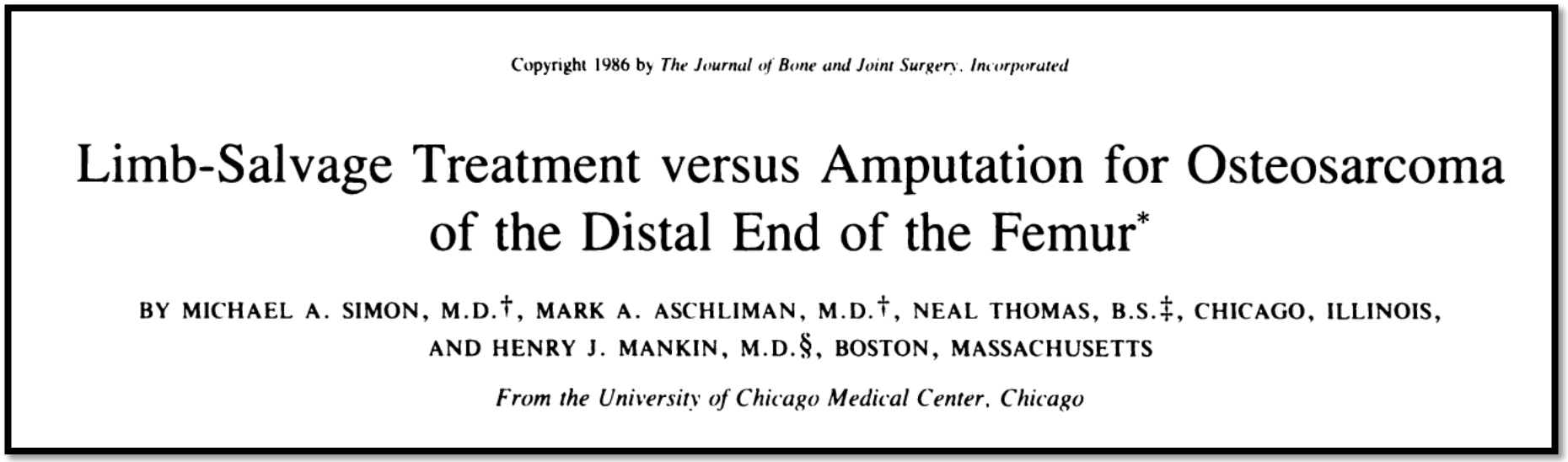


Highlights of Early History of MSTS – 1980-1985

- Beginnings of use of common nomenclature for surgical margins, functional results and staging



First Multi-Institutional Studies



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Limb-Salvage Treatment versus Amputation for Osteosarcoma of the Distal End of the Femur*

BY MICHAEL A. SIMON, M.D.†, MARK A. ASCHLIMAN, M.D.†, NEAL THOMAS, B.S.‡, CHICAGO, ILLINOIS, AND HENRY J. MANKIN, M.D.§, BOSTON, MASSACHUSETTS

From the University of Chicago Medical Center, Chicago

- 26 of 31 institutions participated in the study
- 2 of 43 members declined to participate

Highlights of Early History of MSTS – 1986-1990

- 1988 bylaws/AOI have major revision in Minnesota/Mayo Clinic Support
- New members limited to Orthopaedic Surgeons
- Attendance and publication requirements
- Membership committee and executive committee formed
- First formal election of officers

Norman Jaffe (1923-2022)



- Jaffe still a member of MSTS and last attended meeting in New York, 2019

"I have to continue to go to meetings or they will throw me out"

Other Members of the Early MSTS

- Other important non-orthopaedic surgeons in MSTS:
  - » Steven Withrow, DVM
    Colorado State University
  - » Fred Eilber, MD
    General Surgeon at UCLA





Highlights of Early History of MSTS – 1986-1990

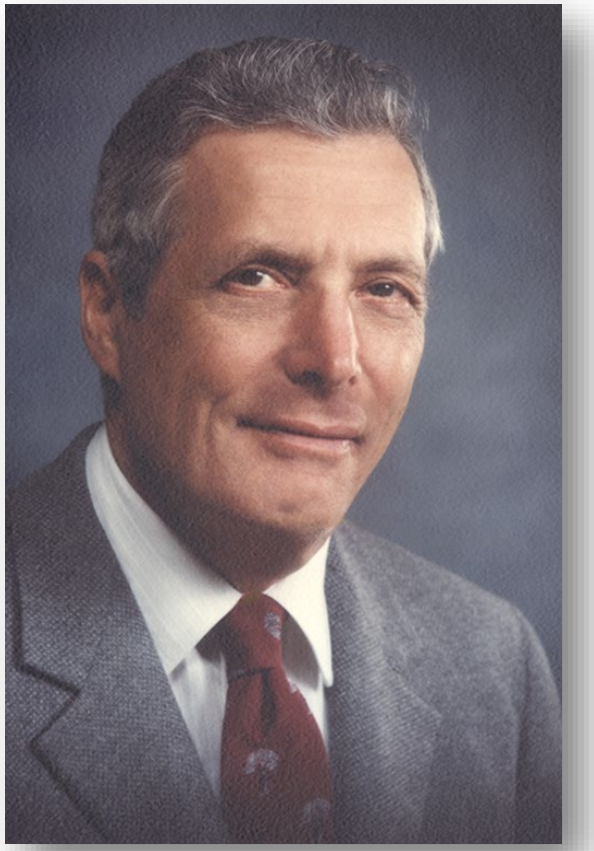
- Major expansion of clinical research presentations and educational efforts via formal relationship with AAOS
  - » Specialty day
  - » ICL
  - » Symposium
- Group projects approval process
- First discussion about ACGME accreditation and ABOS certification
- 1989 first formal international combined meeting MSTS, EMOS, ISOLS in Bologna and St. Michel

Highlights of Early History of MSTS – 1991-1995

- MSTS does not pursue CAQ/CSQ from ABOS
- First formal presidential addresses
- 5 Fellowships become accredited by ACGME
- NRMP match discussions
- Combined meeting of MSTS, ISOL and EMSOS in Florence, Italy
- First discussion concerning workforce challenges

Highlights of Early History of MSTS – 1996-2000

- First discussion of need to have industry sponsorship support for annual meetings
- CORR becomes official journal of MSTS and appoints editor for symposium
- 1st stand-alone retreat for mission/vision/goals of MSTS



MSO Fellows and Fellowships 1975-2000*

Case Western	6
Massachusetts General Hospital	53
Mayo Clinic	31
Memorial Sloan Kettering	21
University of California, Los Angeles	11
University of Chicago	15
University of Florida	52

* List of names available upon request

MSO Fellows and Fellowships: 1970-1975

Year	Mayo Clinic	University of Florida
1970	Franklin Sim	
1971	Henri-Louis Bouchard	Marshall A. Rockwell
1972	Douglas Pritchard	John T. Makley
1973		
1974		James R. Neff
1975		Michael A. Simon

MSO Fellows and Fellowships: 1976-1980

Year	Mayo Clinic	University of Florida	Massachusetts General Hospital
1976		Thomas A. Lange Rhinuis Feith	
1977	Jorge Lopez	William K. Dunham Antonie Taminiau	
1978	Ronald B. Irwin Thomas Shives	Martin Malawer Guben Yuceturk	
1979	Jeffrey J. Eckardt Manmohan Singh	Dempsey S. Springfield John L. Eady	
1980	Steve Gitelis Thomas Kaiser	Mark A. Goodman George Cierny III	Norman Schachar

MSO Fellows and Fellowships: 1981-1985

Year	Mayo Clinic	University of Florida	Massachusetts General Hospital	Memorial Sloan-Kettering	Case Western Reserve
1981	William E. Bowman	Arthur K. Walling		Patrick Boland Richard J. Kearns	
1982	Richard D. Lackman Michael Rock	Branko Sbutega William K. P Li William Christopher Foster	Yoshi Hiki Robin Sullivan	Brian Hurson	
1983	Ross M. Wilkins	Tomonori Yagi Michael Gross	Michael Joyce Michael McGuire	John H. Healey Michael Gebhardt	
1984	Gary D. Bos	Gerhard E. Maale David A. Present	Mark Gebhardt Aaron Rosenberg	Michael Gebhardt	Mark Leeson
1985	Steven M. Scott	Lawrence R. Mendendez Ernest U Conrad III	C. Frederick Lord Harley Gray Robert Bell B. Hudson Berry	Michael Gebhardt	

MSO Fellows and Fellowships: 1986-1990

Year	Mayo Clinic	University of Florida	Massachusetts Gen Hospital	Memorial Sloan-Kettering	Case Western	UCLA	University of Chicago
1986	Herbert S. Schwartz	Donald A. Hackbarth Richard G. Schmidt	Paul Sienkiewicz Colleen Kennedy	Karen Duane George Muschler			Henry A. Finn
1987	Frank J. Frassica	Terry A. Mendelson Marco Maanfrini	Daniel Flugstad Luke Vaughan David Donati Yolanda Roth	Karen Duane George Muschler	John Heiner	Giovanni Pagnatti	Irwin E. Harris
1988	Robert E. Turcotte	Claudio Sollaci Travis G. Heare	Kenneth Yaw Rolf Bloem Kenneth Jaffe	George Muschler David G. Mohler Jessop McDonnell			David K. Monson
1989	Douglas McDonald	Paulus I. Wuisman	John Ready Jorge Navia Mark Johnson L. Candace Jennings	David G. Mohler Steven Robbins Stephen Horowitz		Joseph Matthews	Richard W. Nicholas
1990	Mary I. O'Connor	Suzanne M. Yandow	Kurt Merkel Edward Cheng	Steven Robbins Stephen Horowitz	Ronald Williams		Jeffrey S. Kneisel

MSO Fellows and Fellowships: 1991-1995

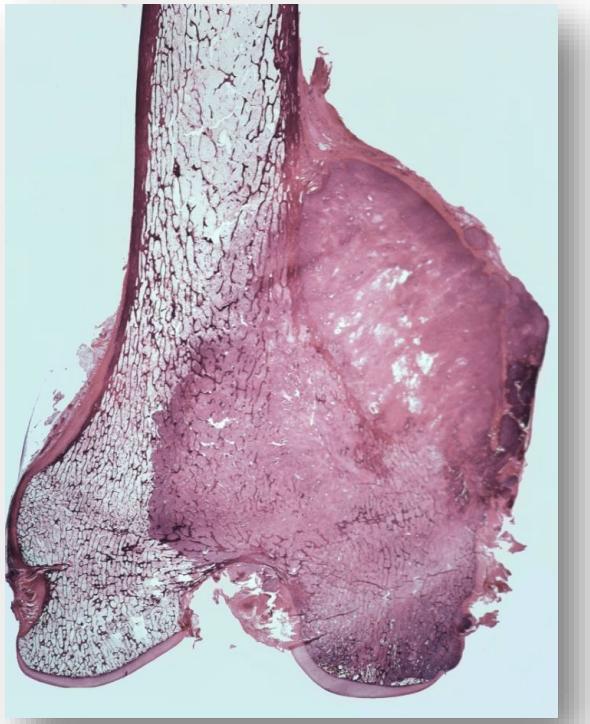
Year	Mayo Clinic	University of Florida	Massachusetts Gen Hospital	Memorial Sloan-Kettering	Case Western Reserve	UCLA	University of Chicago
1991	Thomas E. Nelson	Robert J. Zehr TeShan Liang	J. David Pitcher Mark Scarborough Denis Clohisy	Stephen Horowitz Alan Yasko	Joseph Benevenia	William G. Ward	Terrance D. Peabody
1992		Scott D. Weiner	Douglas Letson Marc H. Isler Theodore Parsons	Alan Yasko Richard Terek			Bruce T. Rougraff
1993	Klaus A. Siebenrock Timothy A. Damron	Brian McGrath Richard Vlasak	H. Thomas Temple Michael Mott Sean Scully	Howard Rosenthal Earl Brien Richard Terek	William Parrish		J. Sybil Biermann
1994	Peter F. Choong Richard A. Schaefer	Michael D. Neel Byoung S. Kim	Regis O'Keefe Robert Quinn Walid Ebeid Eduardo Ortiz-Cruz	Jay Wunder			Mary K. Skrzynski
1995	Richard Vlasak	Guy Moreau Robert E. Wolf	Steven Lietman Michael Hanlon	Edward Athanasian	Amos Peyser	Cynthia Kelly	Parker Gibbs

MSO Fellows and Fellowships: 1996-2000

Year	Mayo Clinic	University of Florida	Massachusetts General Hospital	Memorial Sloan-Kettering	UCLA	University of Chicago
1996	Nicola Fabbri	Chris S. Helmstedter Kahn A. Erler	Marcello Zavatta Henry DeGroot Kimberly Templeton	Scott Wilson		Daniel Wurtz
1997	Kristy L. Weber	Donald C. Beringer Mark S. Meyer Norbert Lindner	Michael Wolfe Francis J. Hornicek	Patrick Lin		Patrick J. Getty
1998	Belen L. Carsi	Gerard Powell Jose Casanova	Francis Y. Lee Eric Hazan	Patrick Lin Theresa Colosi	Philip Wirganowicz	Kimberly Les
1999	Bruno Fuchs	Atiq Durrani Robert Leggon	Joel Sorger Jeffry Menzner	Rex Marco	Christopher P. Cannon	Fran Patterson
2000	Norbert Dion	Allaaddin Mollasbashy Walter Virkus Luis Ramos	Sam Sami Rakesh Donthenini	Carol Morris Holly Brown		Valerae O. Lewis

Pivotal Role of Bone Pathologists in Musculoskeletal Oncology





R. Virchow
Germany

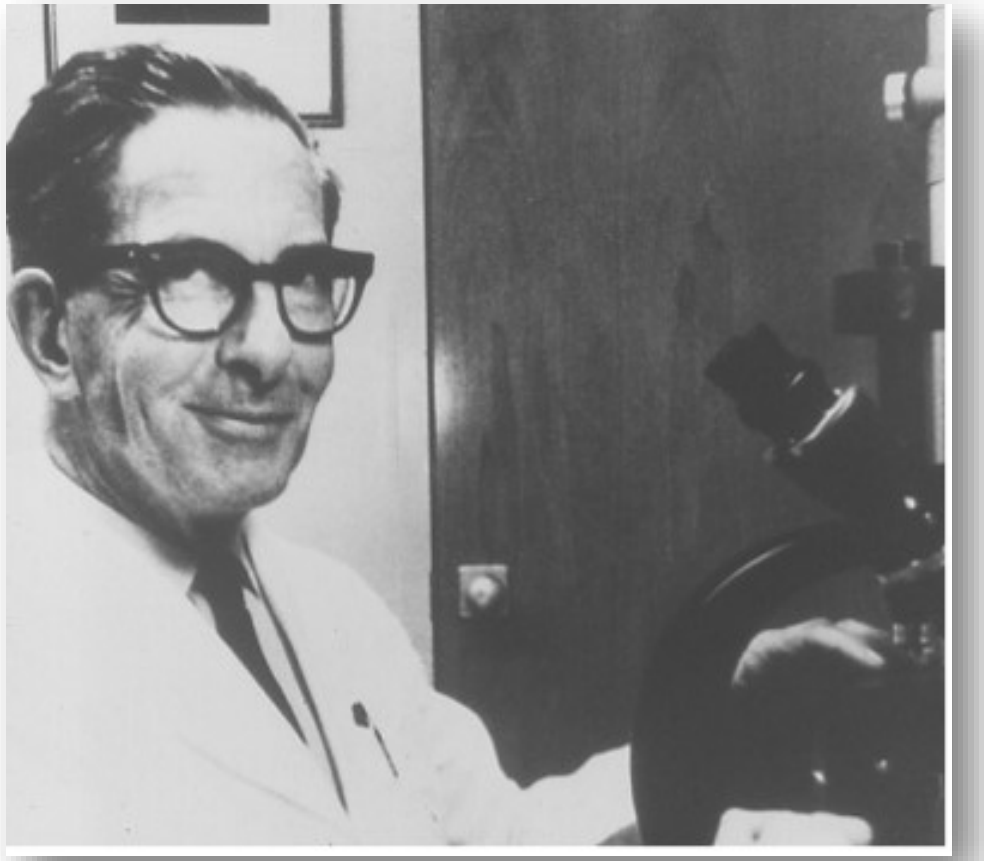
J. Erdheim
Austria

Surgeons
D. Phemister
H. Hatcher

Pathologists
H. Jaffe
F. Schajowicz
E. Freund

C. Howard Hatcher – Legacy to MSTS

- Master educator at The University of Chicago
- Four founders were his residents:
  - » Enneking → Neff, Makley, Springfield
  - » Campbell
  - » Mindell
  - » Bonfiglio
- Mankin enticed to be orthopaedic surgeon by Hatcher when he was an intern in Internal Medicine at The University of Chicago



Hatcher's Educational Legacy to MSTS Continues

- Howard Hatcher International Travelling Fellowship
  - » Endowment was funded by Enneking
  - » 1986 sponsored by the AOA
  - » 2007 sponsored by the MSTS

Acknowledgments

- Simon interviewed all living founders
  - Jaffe
  - Watts
  - Lewis
  - Springfield
  - Sim
- Mayo Clinic
  - Pritchard history 1977-1990
  - Shives secretary of MSTS
  - Lawyers 1987 – AOI & Bylaws
- Staff of MSTS – Kerri Mink and Deborah Meyer
  - Minutes of Business and executive committees 1979-2000
- There are no central records, agendas, or proceedings from the 20th century
  - “Waste Management has all my files”


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Thank you!



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