Combined Harvard Urologic Oncology Fellowship Program
Goals of Department of Urology

To reduce the disease burden for patients with urologic issues by improving:

- Clinical Care
- Teaching
- Research
Goals of Urologic Oncology Fellowship

- Provide a comprehensive and outstanding clinical education in all aspects of urologic oncology
- Build upon and capitalize on the already solid foundation in urologic oncology from residency
- Provide the opportunity for quality and meaningful research – Clinical, Translational, Basic Science
  - Clinical Effectiveness Program – Harvard School of Public Health
  - Mentorship, collaboration and teamwork
- Provide the tools necessary to launch your career and achieve your goals
History of Fellowship Program

- Urologic Oncology Fellowship at MGH 2005
- SUO Accreditation at MGH 2011
- Brigham & Women’s Hospital as Affiliate member 2013
  - First combined fellows entered July 2014
- SUO Accredited Combined Harvard Urologic Oncology Fellowship between MGH & BWH 2015
SUO Fellowship Curriculum

Year 1:

- Summer Program Clinical Effectiveness Course at Harvard School of Public Health
- Development of research projects
- 80% research, 20% clinical
- Participate in one half-day GU Oncology Multidisciplinary Clinic
- During first year, there will be some surgical exposure (approximately once per week) after completion of the Clinical Effectiveness Course
- Fellow will share weekend call with Urology Cabot Attending at Mass General (one weekend per month) or attending call at Brigham & Women’s
- 6 months at MGH, 6 months at BWH
SUO Fellowship Curriculum

• **Year 2**
  - 6 months at MGH, 6 months at BWH/Dana Farber
  - 80% clinical, 20% research
  - GU Medical Oncology and Radiation Oncology Rotation: 4 dedicated weeks with GU Medical and Radiation Oncologists at MGH or BWH/Dana Farber Cancer Institute
  - GU Oncology Pathology – one morning a week during rad onc/med onc month
  - Surgical exposure in the operating room will increase during second year with attention to specific urologic oncologic cases.
  - Fellow will maintain and manage his/her own clinic session for a one half-day session per week → operative cases booked with fellow as attending surgeon
  - Fellow will continue to share in the weekend on-call at MGH or weekly attending call at BWH
MGH Urologic Oncology Faculty

Michael Blute, MD (Chair – Department of Urology)
Adam Feldman, MD, MPH (Director – Urologic Oncology Fellowship Program)
Douglas Dahl, MD
Niall Heney, MD
Francis McGovern, MD
Aria Olumi, MD
Shahin Tabatabaei, MD
Matthew Wszolek, MD
MGH Adjunct Faculty

Medical Oncology:
Othon Iliopoulos, MD, PhD
Richard J. Lee, MD, PhD
Dror Michaelson, MD
Phil Saylor, MD
Matthew Smith, MD, PhD

Radiation Oncology:
Jason Efstathiou, MD, DPhil
Phil Gray, MD
David Miyamoto, MD, PhD
William Shipley, MD
Anthony Zietman, MD

Pathology:
Esther Oliva, MD
Peter Sadow, MD, PhD
Chin-Lee Wu, MD, PhD
Robert Young, MD

Radiology:
Ron Arellano, MD
Debra Gervais, MD
Mukesh Harisinghani, MD
Peter Mueller, MD
BWH Urologic Oncology Faculty

Dr. Adam Kibel (Chair – Division of Urologic Surgery)
Dr. Steven Chang (Associate Director of Urologic Oncology Fellowship Program)
Dr. Kevin Loughlin
Dr. Mark Preston
Dr. Graeme Steele
Dr. Quoc-Dien Trinh
BWH Adjunct Faculty

**Medical Oncology:**
- Joaquim Bellmunt, MD
- Atish Choudhury, MD, PhD
- Toni Choueiri, MD
- William Hahn, MD
- Lauren Harshman, MD
- Elizabeth Henske, MD
- Rana McKay, MD
- Mark Pomerantz, MD
- Christopher Sweeney, MD
- David Takada, MD, PhD
- Mary-Ellen Taplin, MD
- Eliezer Van Allan, MD
- Matthew Vander Heiden, MD, PhD
- Channing Yu, MD, PhD

**Radiation Oncology:**
- Clair Beard, MD
- Anthony D’Amico, MD, PhD
- Neil Martin, MD
- Paul Nguyen, MD

**Pathology:**
- Michelle Hirsch, MD, PhD
- Massimo Loda, MD
- William Welch, MD

**Radiology:**
- Claire Tempany, MD
Residency Format

• 3 residents/yr at MGH and 3 residents/yr at BWH
• 1 year general surgery
• 0, 4 mos, 8 mos research or general surgery (MGH)
• 4 years urology
• At MGH an additional 4-6 months attending position: Cabot Service Chief
MGH Clinical Volume: FY 2015

Outpatient Visits 28,405

Outpatient Office Procedures: 5,765 (11% increase compared to FY 2013)
- Cystoscopy, laser fulguration bladder tumors, vasectomies, stent placement and removal, minor surgical procedures, periurethral injections, prostate biopsies, penile lesion biopsies, urodynamics

Main OR Procedures (six operating rooms): 3,360 cases
- 8% increase since FY 14

Inpatient Admission 1,075
- 17% decrease FY 13
BWH Clinical Volume: FY 2015

Outpatient Visits: ~18,000
  - 9% growth FY 14
  - 9% growth FY 13
  - 2% growth FY 12

Outpatient Office Procedures: 8,055
  - Cystoscopy, laser fulguration bladder tumors, vasectomies, stent placement and removal, minor surgical procedures, periurethral injections, prostate biopsies

BWH + Faulkner + Foxboro OR Procedures: 14,357 cases
  - 2% growth FY 14
  - 1% growth FY 13
  - 4% growth FY 12
• >150 publications per year between the two institutions
• Many externally funded research grants
• Refer to document for publication details
Kidney Cancer

- Renal Biopsy for Suspicious Renal Masses: The MGH Cohort of over 1200 patients (Feldman)

- A comparison of nephron sparing techniques: percutaneous radiofrequency ablation (RFA) vs. open and laparoscopic partial nephrectomy (Feldman)

- Prognostic utility of a multi-gene signature (the cell cycle proliferation score) in patients with renal cell carcinoma (Feldman – funded by Myriad Genetics and NCCN)

- Metabolomic evaluation of renal cell carcinoma using MR Spectroscopy (Feldman and Wu)

- Molecular pathogenesis of angiomyolipoma and other TSC related neoplasm (Wu – funded by NIH/Program Project)
Bladder Cancer

- Comparative outcomes of radical cystectomy and bladder sparing trimodal therapy for muscularis propria invasive bladder cancer (Wszolek and Efstathiou)

- RTOG 0926: Phase II -- Aggressive Forms of Stage T1 Bladder -- Management of Trimodality therapy (TURBT, Chemo- & Radiotherapy) (Dahl and Shipley)

- RTOG 0524: Paclitaxel and Radiation Therapy With or Without Trastuzumab in Treating Patients Who Have Undergone Surgery for Bladder Cancer (Dahl and Shipley)

- RTOG 0712: Phase II -- Muscle-Invasive Bladder Cancer: Tri-modal therapy by Either BID Irradiation Plus 5-Fluorouracil and Cisplatin or QD Irradiation Plus Gemcitabine Followed by Selective Bladder Preservation and Gemcitabine/Cisplatin Adjuvant Chemotherapy (Feldman and Efstathiou)
Prostate Cancer

- 5-alpha reductase 2 expression in adult prostate tissue (Olumi – funded by NIH/R01)

- Molecular Mechanisms of Resistance to Pro-Apoptotic Therapies (Olumi – funded by New York Academy of Medicine)

- Metabolic state of Prostate Cancer Cells determines sensitivity to Metformin in Prostate Cancer Cells (Olumi)

- Analysis of Novel Prostate Cancer Biomarkers (Feldman – funded by DOD & Prostate Cancer Foundation)

- Validating Conditionally Reprogrammed Cells to Advance Personalized Medicine for Prostate Cancer (Feldman – funded by DOD)

- Circulating Tumor Cell analysis in Prostate Cancer (Dahl and Haber)
Prostate Cancer - continued

- Active Surveillance in Prostate Cancer: Clinical outcomes in a longitudinal cohort of 990 patients (Feldman)

- Phase III randomized clinical trial of proton therapy vs IMRT for low or low-intermediate risk prostate cancer (Feldman and Efstathiou)

- RTOG0938: A Randomized Phase II Trial of Hypofractionated Radiotherapy for Favorable Risk Prostate Cancer (Feldman and Efstathiou)

- Metabolomic evaluation of prostate cancer using MR Spectroscopy (Feldman & Wu – funded by NIH)
GU Tissue Pathology Tissue Bank

- Fresh frozen tissue (Wu & McDougal – Funded by MGH Bertucci Research Fund)
  - Prostate: 3547
  - Kidney: 1091
  - Bladder: 244
  - Testis: 140
  - Adrenal: 221
Prostate Cancer

- Prospective Study of Impact of Decipher on Treatment Consideration and Decision Following Pro-Impact (Kibel)
- The Men’s Eating and Living Study (MEAL) – CALGB 70807 (Kibel)
- Energy Balance and Post-Radical Prostatectomy Urinary & Sexual Function (Kibel)
- Neoadjuvant Enzolutamide for High Risk Prostate Cancer (Kibel)
- Genetic Risk Profiling for Prostate Cancer (Kibel)
- Open Registry to Measure the Impact of Adding Genomic Testing on Treatment Decisions (Kibel)
Prostate Cancer - continued

- Germline Sequencing Study for Aggressive Prostate Cancer (Kibel)
- High Throughput Sequencing in Prostate Cancer (Kibel)
- Image Overlay for Robot-Assisted Laparoscopic Radical Prostatectomy (Kibel)
- Comparison of Prostate Cancer Care Across the USA, Canada, UK and Germany (Trinh)
- Comparison of PSA Screening Rates Between Men In Purchased and Direct Care Settings in a Large Military Database (Trinh)
- The Effect of Accountable Care Organizations on Prostate Cancer Care (Trinh)
Prostate Cancer - continued

- Regional variation in prostate cancer screening, incidence and mortality (Trinh)
- Patterns of care and adverse events in men treated with abiraterone acetate and/or enzalutamide for advanced prostate cancer (Trinh)
- Tumor-Specific Fingerprinting by Urinary MMP Analysis (Loughlin)
- Validation of Novel Biomarkers for Early Detection of Prostate Cancer (Loughlin)
- PCORI funded project to develop guidelines for prostate cancer screening in collaboration with Umass (O’Leary)
Kidney Cancer

- Prospective Trial Evaluating Novel Biomarkers for Renal Function (Chang)
- Prospective Trial Evaluating Novel Biomarkers for RCC (Chang)
- Identification of Vascular Progenitor Cells From Human Renal Artery (Chang)
- Identification of Myofibroblasts in Kidney Fibrosis at the time of Nephrectomy (Chang)
- Health Related Quality of Life and Overall Patient Satisfaction with Health Care Following Urologic Surgery of Active Surveillance (Chang)
Bladder Cancer

- Tumor-Specific Fingerprinting by Urinary MMP Analysis (Loughlin)
- SWOG 1011 SLND vs. ELND for bladder cancer (Kibel)
- RAndomiZed Open versus Robotic cystectomy trial – RAZOR (Kibel)
NIH Specialized Programs of Research Excellence (SPORE) Grants

• **Prostate Cancer SPORE**
  - Based at DFHCC (Dana Farber, BWH, MGH, BIDMC)
  - Funds multiple basic science and clinical studies in prostate cancer
  - Eight SPOREs nationally in prostate cancer

• **Kidney Cancer SPORE**
  - Based at DFHCC (Dana Farber, BWH, MGH, BIDMC)
  - Funds multiple basic science and clinical studies in renal cell carcinoma
  - Only funded SPORE in kidney cancer
1846

Joseph Murray, MD
1990 Nobel Laureate in Physiology / Medicine
BWH

Jack W. Szostak, PhD
2009 Nobel Laureate in Physiology / Medicine
MGH

1954-First successful human organ transplant