

**Department of Surgery
FY2019 Annual Report
July 1, 2018 to June 30, 2019**

EXECUTIVE SUMMARY

Fiscal Year 2019 continued to be a transition year for the Department of Surgery. Rajabrata Sarkar, M.D., Ph.D. continued his role of Interim Chair of the Department of Surgery while still holding the positions of Vascular Surgery Division Chief and Vice Chair of Clinical Operations for the Department of Surgery during this interim period. The official search for a permanent Chair started in FY2019. An extensive nationwide search in which nearly 100 candidates were nominated for this coveted position. We are delighted to announce that Christine L. Lau, M.D., M.B.A. was selected as the top candidate and that she accepted the position as Chair of the Department of Surgery. Dr. Lau is a nationally renowned thoracic and lung transplant surgeon who is widely regarded for her leadership in the field of thoracic surgery. She is a federally funded scientist and an expert clinician who is widely-acclaimed for her work in improving outcomes for lung transplant patients. Dr. Lau will begin her appointment with the Department of Surgery on December 1, 2019.

The Department of Surgery had a successful FY2019. We exceeded prior year's charges and net collections, due primarily to our new Office Based Laboratory (OBL) that opened in the 419 W. Redwood building. The new OBL offers low cost, more efficient procedures to our patients, while moving ambulatory volume out of the UMMC. We exceeded our charges to budget and just a tad short of our net collections budget. We continue to add new provider service contracts with other hospitals within and outside of the University of Maryland Medical System and we are working closely with the University of Maryland Medical Center, the University of Maryland Midtown Campus and the Faculty Practice Office, Waterloo location to transfer outpatient ambulatory volume to the most cost efficient, high quality location.

The research mission of the department had a very successful year in FY2019. The Department submitted 151 new grant applications with 61 applications being funded for a 31% success rate. In FY2019, the Department of Surgery met 4% of the 8% eligible incentive of the faculty incentive plan.

In FY2019 Dean Reece, working in collaboration with Dr. Mohan Suntha, UMMC President and Dr. Jay Perman, University of Maryland, Baltimore President, launched a campus-wide Culture Transformation Initiative. The Culture Transformation Initiative is a long-term program dedicated to ensuring a professional, respectful and inclusive work environment for all. Two of our faculty have taking leadership roles in supporting this initiative. Dr. Sheri Slezak, Division Chief for Plastic Surgery, was appointed the Vice Chair of Faculty Affairs. In this role Dr. Slezak works with Dr. Nancy Lowitt in the Dean's Office

to ensure that the Department of Surgery is moving towards a professional, respectful and inclusive work environment. Dr. Kimberly Lumpkins, a pediatric urologist, was named the first President of the University of Maryland School of Medicine, Women in Medicine and Science (WIMS) organization. This organization supports the professional and academic success of women faculty.

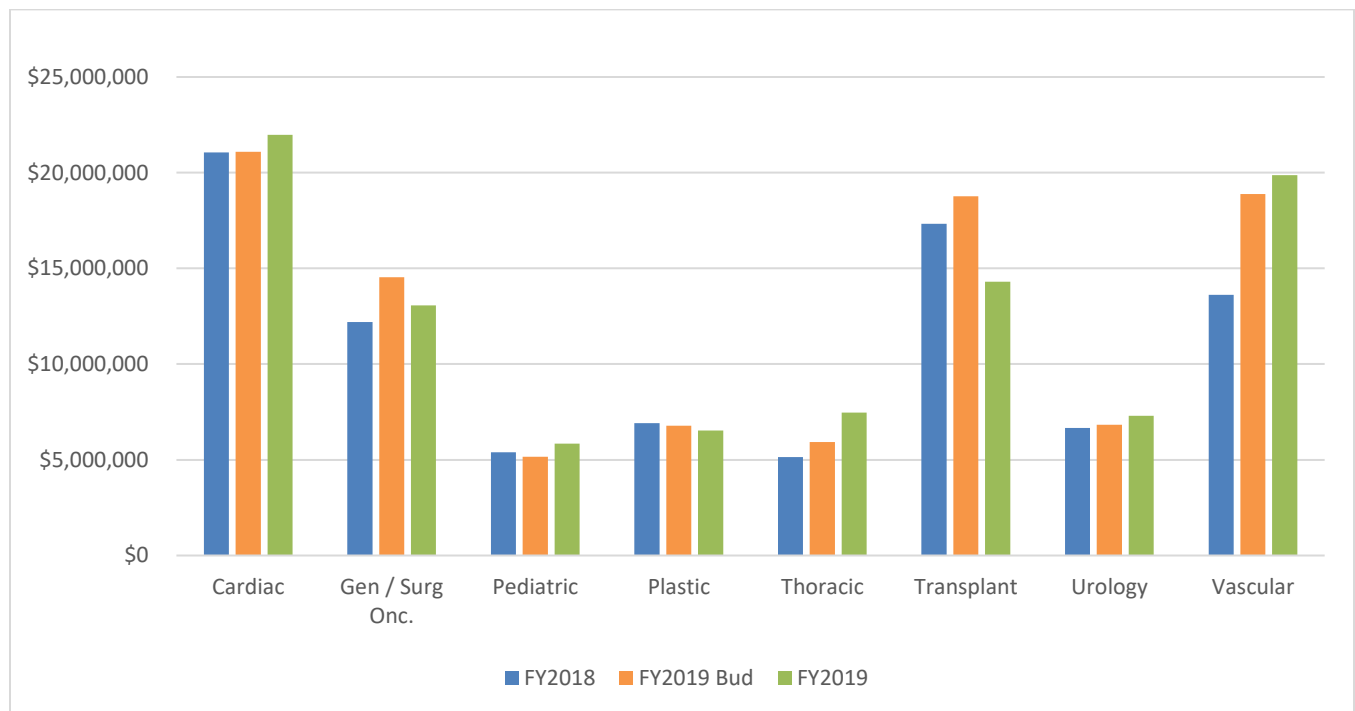
CLINICAL OVERVIEW

The table below shows our Total Charges and Collections vs budget and vs prior year.

	FY2019 Year-End	FY18 Year-End	\$ Variance	% Variance	FY2019 Budget	\$ Variance	% Variance
Charges	\$96,372,168	\$88,336,794	\$8,035,374	9.10%	\$92,493,675	\$3,878,492	4.2%
Net Collections	\$27,629,354	\$25,521,031	\$2,108,323	8.26%	\$27,978,312	(\$348,958)	-1.25%

The Department has a fantastic year versus prior year, exceeding charges by 9.1% and exceeding net collections by 8.26%. We exceeded charge budget by 4.2% and just missed our net collection budget by 1.25%.

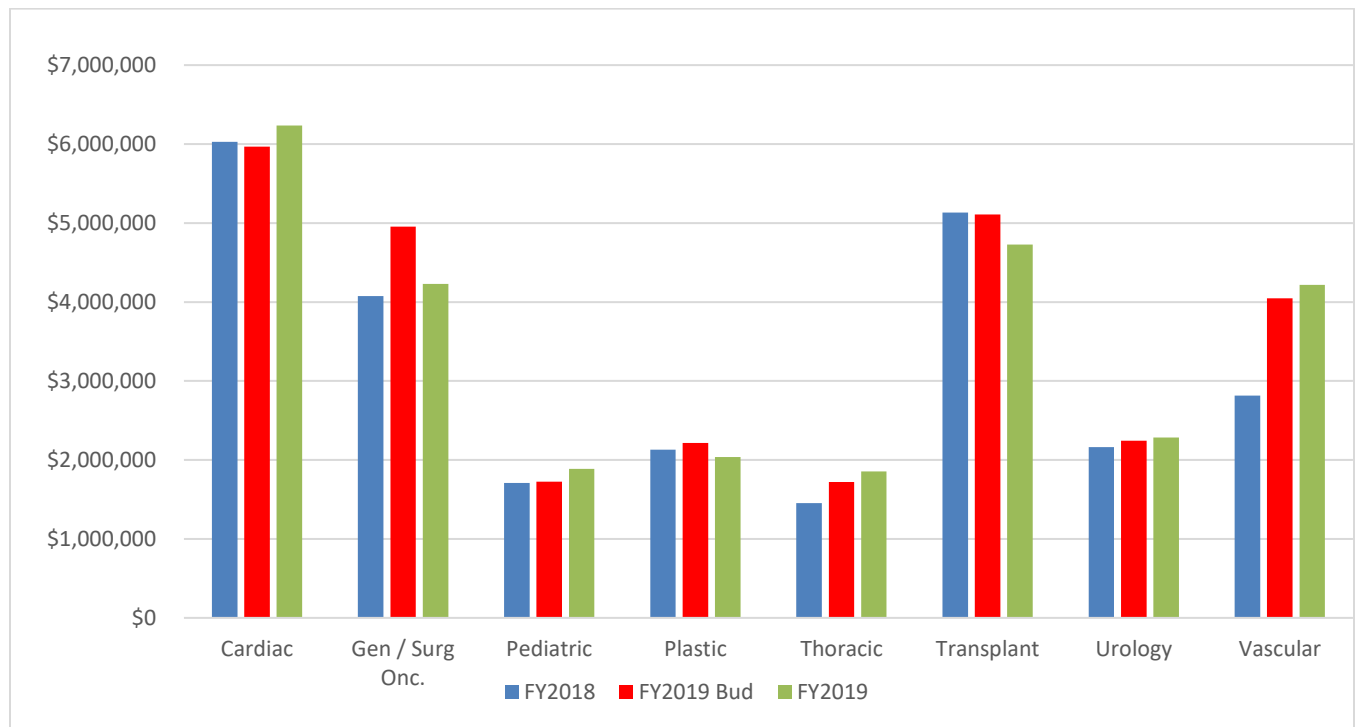
The graph below shows our Total Charges vs budget and vs prior year by Division.



All divisions increased charges over prior year with the exception of Plastic Surgery and Transplant. Plastic surgery had 5.65% reduction in charges due to a shift to UMMT (which is not listed) and Transplant

had a 17.45% reduction in charges due to faculty turnover and organ acquisition challenges. All divisions increased charges versus budget with the exception of General/SurgOnc, Plastic Surgery and Transplant. General/SurgOnc had a budget that included FTE that were not hired in FY2019. The Department hit \$9 million in charges for the months of April and May, the highest charge months in the history.

The graph below shows our Total Net Revenue vs budget and vs prior year by Division.



All divisions increased net revenue over prior year with the exception of Plastic Surgery and Transplant. Plastic surgery had 4.44% reduction in net revenue due to a shift to UMMT (which is not listed) and Transplant had a 7.90% reduction in net revenue due to faculty turnover and organ acquisition challenges. All divisions increased net revenue versus budget with the exception of General/SurgOnc, Plastic Surgery and Transplant. General/SurgOnc had a budget that included FTE that were not hired in FY2019.

The Table below shows our total case volume vs budget and vs prior year.

	FY2019 Year-End	FY18 Year-End	\$ Variance	% Variance	FY2019 Budget	\$ Variance	% Variance
Total Cases	13,013	12,070	943	7.81%	13,875	(862)	-6.21%
UMMC	8,514	8,591	(77)	-0.90%	9,400	(886)	-9.43%
Non- UMMC	4,499	3,479	1,020	29.32%	4,475	24	0.54%

As the Department continues to expand our locations throughout the State of Maryland, we are also seeing a shift in case volume from UMMC to other UMMS/SOM locations. Locations that had significant case volume increases from FY18 include our new Office Based Laboratory (OBL) in the 419 W. Redwood street building, the UM Midtown Campus (UMMT), and UM Charles Regional. We also had increased case volume at SOM-Waterloo, UM Shore Regional Health (UMSRH), UM Upper Chesapeake (UMUC) and UM Baltimore Washington (UMBWMC).

The Table below show UMMS case volume by location.

	FY18	FY2019 Bud	FY2019	Act/PY	Act/Bud
UMBWMC	40	0	54	14	54
UMMT	496	671	872	376	201
UMROI	13	14	5	(8)	(9)
UMSRH	283	301	315	32	14
UMSJ	234	259	207	(27)	(52)
UMUC	360	355	381	21	26
UM_Charles Regional	0	138	124	124	(14)
UM_Capital Region	243	354	192	(51)	(162)
Urology-ASC - SOM	631	709	558	(73)	(151)
Vascular-OBL - SOM	35	516	443	408	(73)
Waterloo-ASC - SOM	15	64	52	37	(12)
TOTAL UMMS_SOM	2,350	3,381	3,203	853	(178)

The Table below show non-UMMS case volume by location.

	FY18	FY2019 Bud	FY2019	Act/PY	Act/Bud
Bon Secours	79	0	39	(40)	39
GBMC	185	170	192	7	22
Hanover, PA	163	70	128	(35)	58
Johns Hopkins	0	0	63	63	63
MedStar-FSH	38	60	11	(27)	(49)
Mercy	20	20	28	8	8
Sinai	217	203	245	28	42
St. Agnes	148	371	405	257	34
Total Non-UMMS	850	894	1,111	261	217

Non-UMMS locations that had significant case volume increases from FY18 include St. Agnes and Johns Hopkins. We added additional FTE support in both Thoracic and Vascular Surgery at St. Agnes in

FY2019. Johns Hopkins is a new contract in FY2019 for Congenital Heart services that we hope will continue in FY2020.

FINANCIAL OVERVIEW

The Department ending the year with a profit of \$13,995. We exceeded FY18 total revenue by \$2.4M or 4%. Our top three revenue sources after cash collections were PSC at 23% of total revenue, provider contracts at 20% of total revenue and grant and contract revenue at 10% of total revenue. We generated \$5.2M in assessments to the Medical School and the Faculty Physicians, Inc. Due to unfilled faculty positions, and a keen eye on operating expenses, we saved a total of \$1.3M in total expenses verses budget in FY2019.

COST SAVINGS INITIATIVE (CSI)

In FY2019, the Department of Surgery continued to collaborate with the UMMC to develop a shared cost savings initiative plan. The incentive portion of the plan has been replaced with a penalty only of 10% of the Department's total PSC allocation or \$1,555,074.

The FY2019 Dashboard Initiatives included the following five (5) core metrics:

- Efficacy – Observed vs Expected (OE/E) Mortality – 20%
- Efficiency:
 - Observed vs Expected (O/E) Length of Stay – 10%
 - Direct Variable Costs – 10%
- Effectiveness:
 - Readmission Rate – 10%
 - % of Discharge Orders Placed by 12:00noon – 10%
- Safety - Hospital Acquired Infections:
 - Bed Unit Specific (CLABSI/ CAUTI) – 10%
 - Hospital Wide (MRSA/ C Diff) – 10%
- Patient Centeredness – HCAHPS – MD Driven – 20%

As of August 13, we have data through fiscal year to date May 2019. The UMMC has decided to not penalize the Departments in FY2019 as we do not have a full year of data. The Department of Surgery has been a good partner with the UMMC in researching and implementing new processes to meet and exceed the core metrics set by UMMC. Our Surgical Oncology Division has exceeded every core metrics through May, which is a major accomplishment. Our Cardiac Surgery Division has worked diligently with UMMC on a pilot program, Together-MD to drill into the details of every core metric but is still missing their target by 40%. Our Transplant Division is having a difficult year with surgeon transition and is missing their target by 65%. Based on the May data, the Department of Surgery would be financially penalized 36% of the 10% “at risk” or \$559,584. The Department has asked that both Cardiac and Transplant be waived, which would reduce the penalty to \$196,194.

RESEARCH OVERVIEW

The 2017 Blue Ridge Rankings place the Surgery Department as #23, with \$5,144,784 in NIH funding. We anticipate our rankings will improve substantially for 2018 and 2019, due to numerous new NIH grants and due to capturing several grants that had not been properly ascribed to the Surgery Department. Current data show that NIH awards now total approximately \$8,100,000 which would place our Blue Ridge Ranking in the top 15.

Research FY2019 Applications and new awards to date:

- 194 Grant Applications this Fiscal Year
 - 27 (15 new) NIH applications
 - 28 NIH sub-award applications
 - 36 other-Federal applications
 - 88 Corporate, Foundation, & Industry sponsored applications
 - 15 Maryland State Government Applications

- 98 new awards to date:
 - 14 New NIH awards
 - 8 New NIH sub-contracts
 - 10 New other-Federal awards/sub-contracts
 - 55 New Corporate, Foundation, & Industry awards
 - 11 New Maryland State Government

Notable New Awards:

NIH

- John Olson - Parathyroid Tumor Clonal Status as a Biomarker in Primary Hyperparathyroidism
- Sunjay Kaushal - Characterization of the Cardiac Progenitor Cell Exosomes for Optimal Therapeutics
- Jonathan Bromberg – Lymph Node Structure and Function in Tolerance: Roles of Laminins
- Jonathan Bromberg – Induction and migration of regulatory T cells: role of lymphotoxin
- Dudley Strickland – Role of LDL receptor family members in protecting the vasculature
- Rosemary Kozar – Endothelial injury and repair following hemorrhagic shock
- Pan Zheng – A mouse Model to Assess Long Term Immunotherapy-related adverse effects in children

NIH Subs

- Sunjay Kaushal – Emory University – Predictive and systems modeling of exosome cargo
- Rosemary Kozar – May Clinic, Rochester – Predictors of Venous Thromboembolism: A Multicenter Prospective Cohort

- Brajesh Lal – Carotid Revascularization and Medical Management for Asymptomatic Carotid Stenosis Trial – Hemodynamics (CREST-H)

DOD/ DOD Subs

- Samuel Tisherman – Emergency Refreshing of Combat Surgical Skills
- Michael Grant – JHU – Complex Orbital Reconstruction

Foundation/Other

- Sudhish Sharma – American Heart Association – Characterization of the Cardiac Progenitor Cell Derived Exosomes for Optimal Therapeutics
- Yin Wang – The Childhood Brain Tumor Foundation – A novel Mechanism and Immediately - Translatable Target for Group 3 Medulloblastoma
- Thomas Scalea – Geneva Foundation – Mesh Suture: Achieving a More Durable Closure

Corporate

- Khanjan Nagarsheth – Ogenix – A Prospective, Randomized, Crossover Study of Transdermal, Continuous Oxygen Therapy for Surgical Site Wound Healing in High-Risk Subjects
- Yang Lui - OncoImmune, Inc. – Collaboration Agreement OncoImmune and UMB
- James Gammie – Medtronic Inc. – Medtronic PERIGON Pivotal Trial

State of Maryland

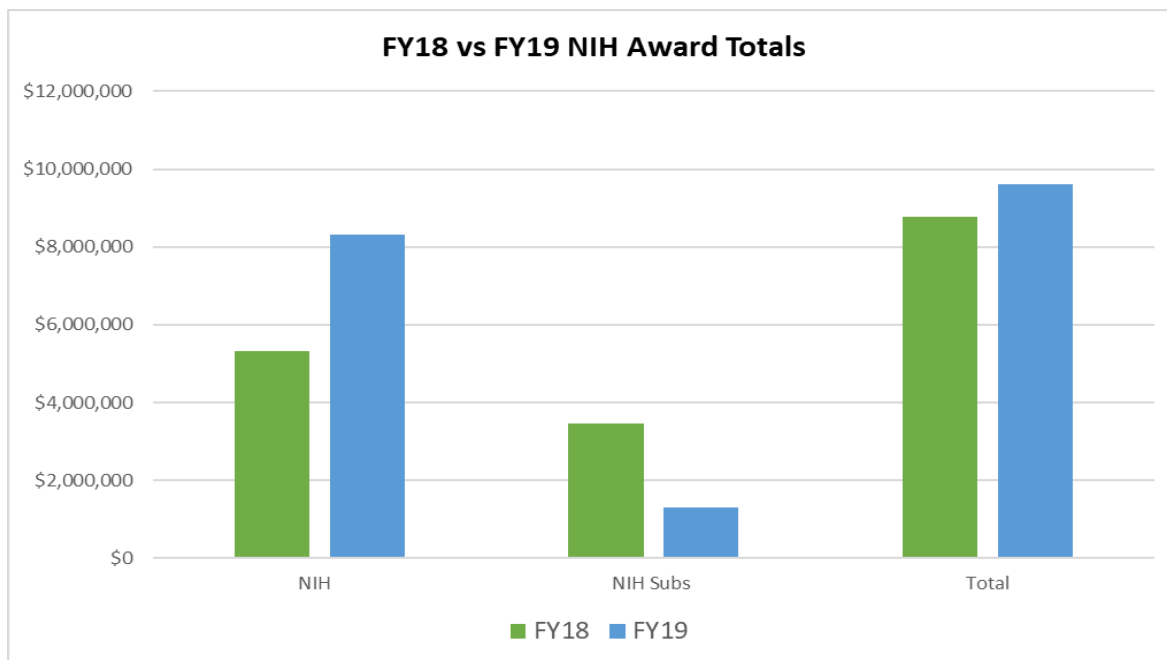
- **Maryland Industrial Partnership Program (MIPS)**
 - Mohummad Siddiqui – Bladder Cancer Diagnostic Signature Validation – Phase II
 - Brajesh Lal – Novel Targeted Imaging Application for PAD – Phase II
- **Maryland Technology Development Corporation (TEDCO)**
 - Joseph Scalea – Reinventing Transplant Transportation: Real-Time Organ Management using the HOMAL and COM App.
 - Muthukumar Gunasekaran – Donor derived exosomes as non-invasive serum biomarker for immune rejection following human neonatal cardiac progenitor cell transplantation.

New NIH awards over the last year include the following:

- John Olson - Parathyroid Tumor Clonal Status as a Biomarker in Primary Hyperparathyroidism
- Sunjay Kaushal - Characterization of the Cardiac Progenitor Cell Exosomes for Optimal Therapeutics
- Sunjay Kaushal – Predictive and Systems Modeling of Exosome Cargo
- Brajesh Lal – (New Supplement) – Dental Carotid Cognitive Study
- Rishi Kundi - STTR Phase IIA, Automated 3D Ultrasound-based Surveillance of Arteriovenous Fistula Maturation for Post-operative Hemodialysis Patients
- Pan Zheng - A Mouse Model to Assess Long Term Immunotherapy-related Adverse Effects in Children.

- John Wu - Research Supplements to Promote Diversity in Health-Related Research, To investigate the contribution of membrane surface and non-physiological shear stress to hemostatic function of blood cells and Proteins relevant to device biocompatibility
- JY Wang - Mucosal Repair in Gut Surgical Disorders
- Jonathan Bromberg - Microbiota modify myeloid cell innate immunity and lymph node structure and function to regulate alloimmunity and transplant outcome
- Jonathan Bromberg - Immunological and functional consequences triggered by the gut microbiota regulate alloimmunity and cardiac transplant outcomes
- Arek Ucuzian – K08 Mechanisms of aortopathy in LRP1 deficiency
- Nariman Balenga - Mechanisms of activation, signaling and trafficking of adhesion GPCRs GPR64 and GPR56
- Jonathan Bromberg - U Maryland Mid-Atlantic APOLLO Research Network Omic and Clinical Center
- Thomas Monahan – NHLBI – The effect of Myristolated alanine-rich C Kinase Substrate (MARCKS) on kinase interacting with stathmin (KIS) in differential proliferation of vascular smooth muscle
- Bartley Griffith/Jon Wu - Development and Pre-Clinical Trial Qualification of a Pediatric Pump-Lung System for Children

NIH Awards – FY18 vs FY2019



Submitted NIH RO1 Proposals, Pending Review or Scored

PI	Sponsor	Title	Submission date	Award Date expected
Nariman Balenga	NIH	Mechanisms of activation, signaling and trafficking of adhesion GPCRs GPR64 and GPR56 – New	08/08/2018	9/1/2019
Jonathan Bromberg	NIH	Microbiota modify myeloid cell innate immunity and lymph node structure and function to regulate alloimmunity and transplant outcome – New	02/28/19	9/1/2019
J.Y. Wang	NIH	Mucosal Repair in Gut Surgical Disorders – Competing Renewal	04/03/19	9/1/2019

Capturing other grants from faculty is the direct result of improved oversight of the financial and administrative components of our research. The improved oversight is in turn due to the turnover of the research administrative staff which has now been replaced with a more professional, better trained, and better performing and cohesive group. Our research administrative group includes the following:

Jocelyn Klucar – Director of Research Administration

Liliya Kravets – Budget Analyst

Manka Tatarova – Accounting Manager

Brenda Bailey – Administrative Assistant

Chris Plucker – Contracts and Grants Coordinator

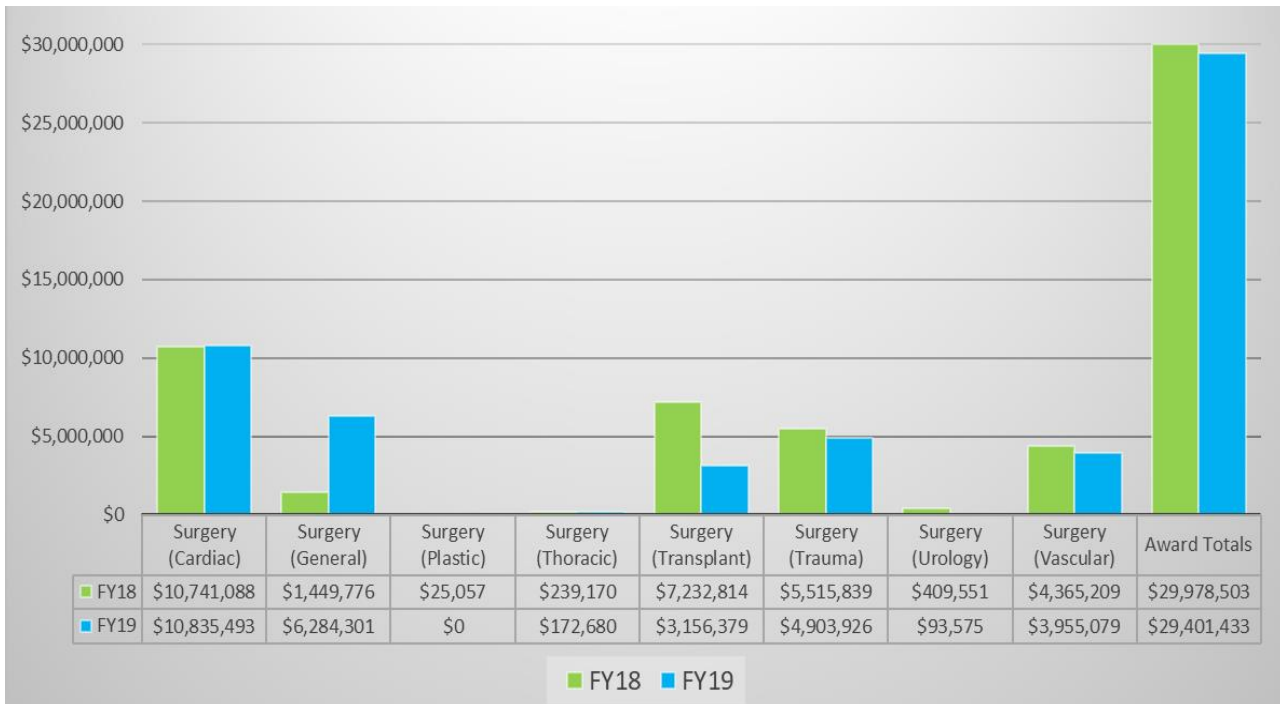
Matt Poland – Senior Contracts and Grants Specialist

Rachel Quinn – OR manager

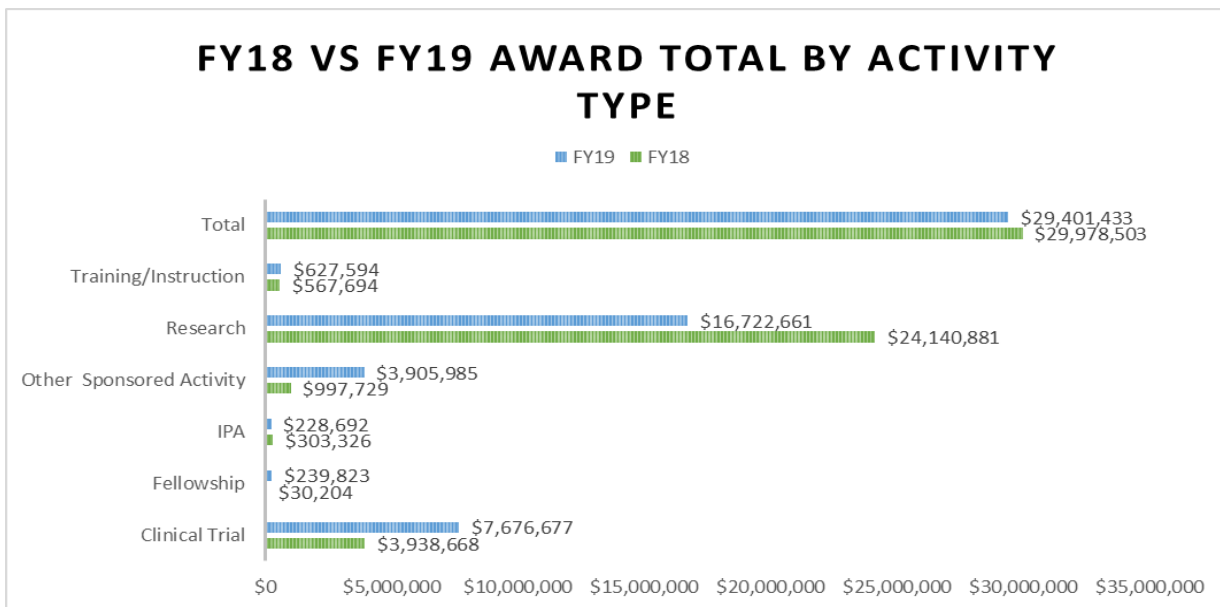
As noted above there has been a complete turnover in Research Administration. The performance of the staff is markedly improved for pre-award preparations and submissions, post award accounting, tracking of finances, compliance with financial rules, compliance with EHS and IACUC, streamlined ordering processes for the labs, and rehabilitation of the physical plant on MSTF4. Improvements on-going and/or planned to MSTF4 include new signage, rekeying of doors, dry wall to the corridors, cleaning up of lab spaces, and reassignment of lab space according to funding status.

Total sponsored reach awards are now over \$29,000,000, with the most significant activity in the Divisions of Cardiac, General, Transplant, Trauma, and Vascular.

The follow graph shows research awards by division for FY2019 versus FY18.



The below graph shows award total by activity type. The areas of greatest activity include clinical trial grants and research grants.



There have been many internal UMB grants to the department, including:

UMB Institute for Clinical & Transnational Research (ICTR) Voucher (Micro-grants) program

Brajesh Lal - Treatment of Periodontitis to Prevent Dementia in Older Adults with Asymptomatic Carotid Artery Stenosis and Mild Cognitive Impairment

Dr. Pan Zheng - Targeting tumor specific glycoprotein with bispecific antibody and CAR-T for ovarian cancer immunotherapy

Dr. John Olson - Parathyroid Tumor Clonal Status as a Biomarker in Primary Hyperparathyroidism: Unfunded R01 subproject to characterize the transcriptome of monoclonal and polyclonal parathyroid tumors

Dr. Nairman Balenga - The role of GPR64 in calcium homeostasis and bone development

ICTR Accelerated Translational Incubator Pilot (ATIP) grants

Dr. Joseph Scalea - Understanding the potential human impact of drone organ transportation

Center for Maryland Advance Ventures

Dr. James Gammie - \$136,000 - Transseptal Device

There has been a significant effort over the last year to foster relationships with UMCP, especially in the Department of Bioengineering. Our activities have included sponsoring the undergraduate BIOE4890 course held at UMB in January, presenting at the Fischell Institute for Biomedical Devices kickoff in January, hold a joint Surgery-Bioengineering Symposium at UMCP in April, presenting at the UMGCCC Cancer Imaging Retreat at UMCP in May, and plans for another Surgery-Bioengineering Symposium in October.

Current collaborations with UMCP include the following:

- Jonathan Bromberg/Christopher Jewell, UMCP Bioengineering
- Sunjay Kaushal/Steven Jay, UMCP Bioengineering
- Thomas Monahan/Peter Kofinas, UMCP, Biomedical Engineering
- Joe Scalea/Norman Wereley, UMCP Aerospace/Matt Scassero UMCP
- Minhaj Siddiqui/Axel Krieger, UMCP, Mechanical Engineering/Ganesh Sriram, UMCP Chemical Engineering

Much effort has been expended to focus on purposeful mentoring and career oversight for trainees and faculty. In conjunction with the Educational leaders in the Department, the needs of students and residents for research (e.g., FRCT and General Surgery Resident Research Years) have been addressed very specifically to ensure that trainees are in productive and well-funded environments with mentors who have a productive track-record in both education and research. We now track the progress of trainees, mentors, and the entire department about outcomes and productivity of the trainees. There is now a purposeful effort to define the research components for all new faculty and current junior faculty, to establish mentoring committees for junior faculty engaged in research, to identify resources for faculty research, and to invest seed funds in explicit and productive projects.

There have been several high-profile presentations and publications from our department including two New England Journal of Medicine articles on breast cancer with John Olson as site PI and consortium investigator, cardiac stem cells in Science Translational Medicine by Sunjay Kaushal, T cell migration in Science Immunology by Jonathan Bromberg, and the use of drones for organ transportation by Joseph Scalea.

For education and mentoring in research faculty served as 2018 Seniors Mini-Med Program (M Mohiuddin and J Scalea). For the summer of 2018, the Department of Surgery and Program in Trauma together comprised 22% (13/60) of all PRISM applications and 21% of approved PRISM projects (9/43) for medical students. The Department of Surgery alone had 16% of all approved PRISM projects. Dr. Ucuzian co-moderated sessions at the American College of Surgeons scientific session 2018, and serves on the Eastern Vascular Society research committee, the Society for Vascular Surgery research and education committee and the VA surgeons committee.

For career development in the Kaushal lab, Dr. Sudhish received an AHA-Career development grant, Dr. Rachana received an MSCRF-discovery research grant, and Dr. Muthu received an MSCRF-postdoc fellowship.

RESEARCH TABLES:

Table 1: Recognized Revenue from Sponsored Projects Expenditures by Type

Recognized Revenues by Type of Sponsor					
	FY2017	FY2018*	FY2019	Variance \$ FY18 vs FY2019	Variance % FY18 vs FY2019
Total NIH	\$6,450,385	\$5,098,949	\$5,262,972	\$164,023	3.2%
Total Other Federal	\$1,849,884	\$1,718,289	\$1,032,797	(\$685,492)	-39.9%
Total Other	\$8,168,702	\$15,118,551	\$9,936,035	(\$5,182,516)	-34.3%
TOTAL	\$16,468,971	\$21,935,789	\$16,231,804	(\$5,703,985)	-26.0%

*FY2018 inflated by the \$3.1 million in the Xenotransplantation Capital project funds and project spenddown by the Pierson lab who departed at the end of 2018.

Table 2: Recognized Revenue from Sponsored Projects

Recognized Revenues from Sponsored Projects					
	FY2017	FY2018	FY2019	Variance \$ FY18 vs FY2019	Variance % FY18 vs FY2019
Common Trust	\$0	\$21,339	\$50,455	\$29,116	100.00%
Federal:					
DOD	\$1,127,738	\$1,365,010	\$670,994	(\$694,016)	-50.84%
IPA/Contract	\$453,199	\$353,279	\$361,803	\$8,524	2.41%
NIH	\$4,938,396	\$5,098,949	\$5,262,972	\$164,023	3.22%
Non-Gov. Deliverable:					
Corporate	\$7,011,784	\$11,684,778	\$6,009,004	(\$5,675,774)	-48.57%
Non-Gov. Standard:					
Corporate	\$1,012,314	\$819,098	\$1,068,456	\$249,358	30.44%
DOD Subcontract	\$268,947	\$177,149	\$375,866	\$198,717	112.18%
Foundation	\$106,829	\$74,061	\$49,731	(\$24,330)	-32.85%
Other non-profit	\$24,322	0	0	\$0	0.00%
NIH Subcontract	\$1,511,989	\$2,178,696	\$1,935,547	(\$243,149)	-11.16%
State:					
MD TEDCO	\$1,183	\$163,429	\$446,976	\$283,547	173.50%
Other	\$12,270	\$0	\$0	\$0	0.00%
Totals	\$16,468,971	\$21,935,788	\$16,231,804	(\$5,703,984)	-26.00%

Table 3: Recognized Revenue from Federal Expenditures by Department/Program Fiscal Year 2019

FY2019 Revenues from Federal Awards by Department/Program					
	Surgery	CVID	Trauma	IHV	Total
NIH- direct	\$2,705,203	\$1,443,650	\$178,353	\$935,766	\$5,262,972
NIH -subcontract	\$1,734,868	\$74,766	\$125,913	\$0	\$1,935,547
Total NIH	\$4,440,071	\$1,518,416	\$304,266	\$935,766	\$7,198,519
Other Federal- direct	\$683,652	\$0	\$349,145	\$0	\$1,032,797
Other Federal- subcontract	\$26,722	\$0	\$23,009	\$0	\$49,731
Total Other Federal	\$710,374	\$0	\$372,154	\$0	\$1,082,528
TOTAL FEDERAL	\$5,150,445	\$1,518,416	\$676,420	\$935,766	\$8,281,047

Table 4: Grant Proposal Submissions and funded to date FY2019 compared to FY18

Grant Proposal Submissions (EXCLUDING non-competitive renewals and transfers)/

Type	FY2018		FY2019	
	# submitted	# funded	# submitted	# funded TO DATE
NIH direct -Research	24	2	22	1
NIH direct - Training	1	0	0	0
NIH direct - Fellowship	1	0	1	0
NIH subcontract -Research	30	6	22	2
NIH subcontract -Clinical Trial	5	3	0	0
Other Federal direct -Research	4	5	12	0
Other Federal direct -IPA	5	5	6	5
Other Federal direct -Services	0	2	5	5
Other Federal subcontract -Research	5	2	9	2
Other Federal subcontract – Clinical Trial	2	2	2	0
Other Federal subcontract -Training	1	1	0	0
ALL FEDERAL	78	28	79	15
MD TEDCO/MIPS -Research	6	2	8	4
MD TEDCO/MIPS -Fellowship	2	0	4	1
Corporate - Research	7	6	7	6
Corporate - Clin. Trial	28	16	19	15
Corporate – Fellowship/Training	0	0	2	1
Assoc./Foundation -Research	11	4	12	1
Assoc./Foundation -Fellowship	3	1	7	3
Assoc./Foundation -Clinical Trial	1	0	1	0
State Agencies - Services/Other	2	2	2	2
UMD internal seed funding	0	0	1	1
ALL NON-FEDERAL	60	31	63	49
Total	138	59	142	64

Table 5: FY2019 Grant Proposal Submission by Sponsor

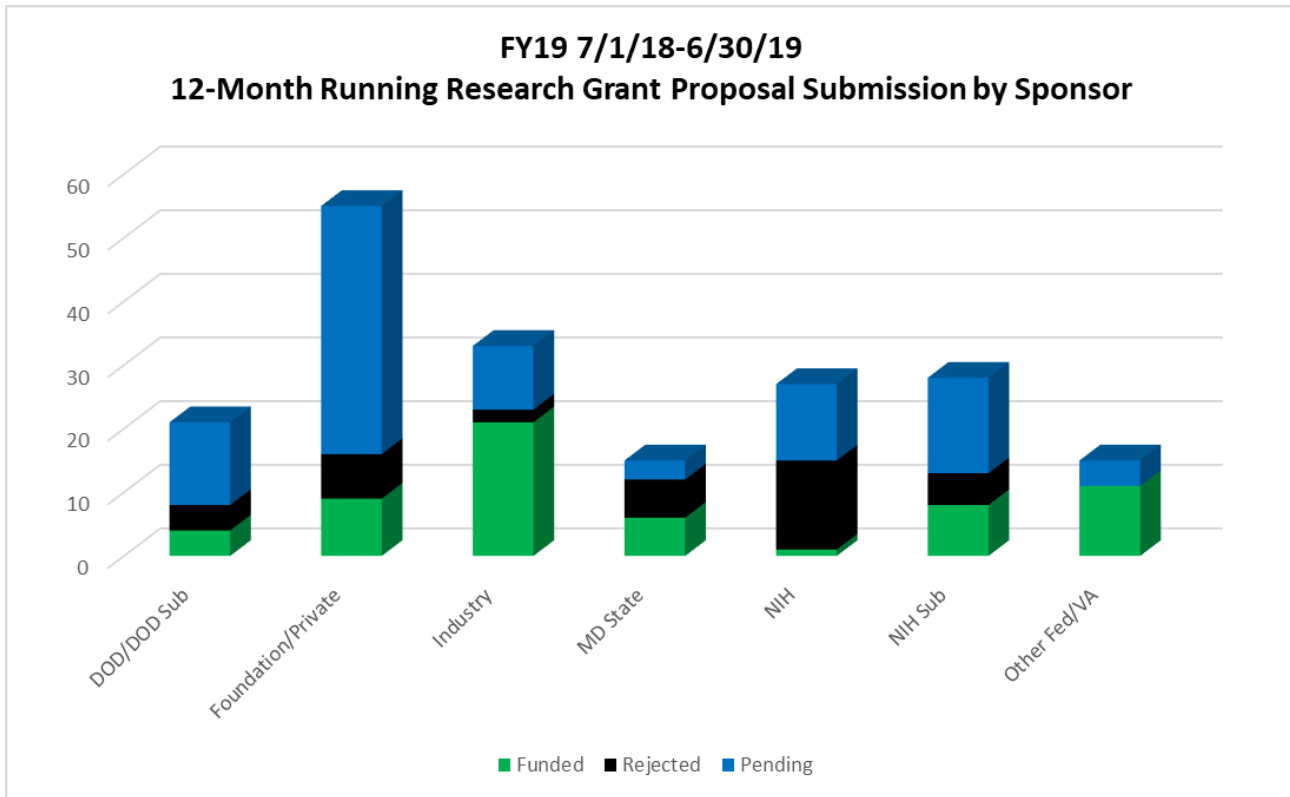
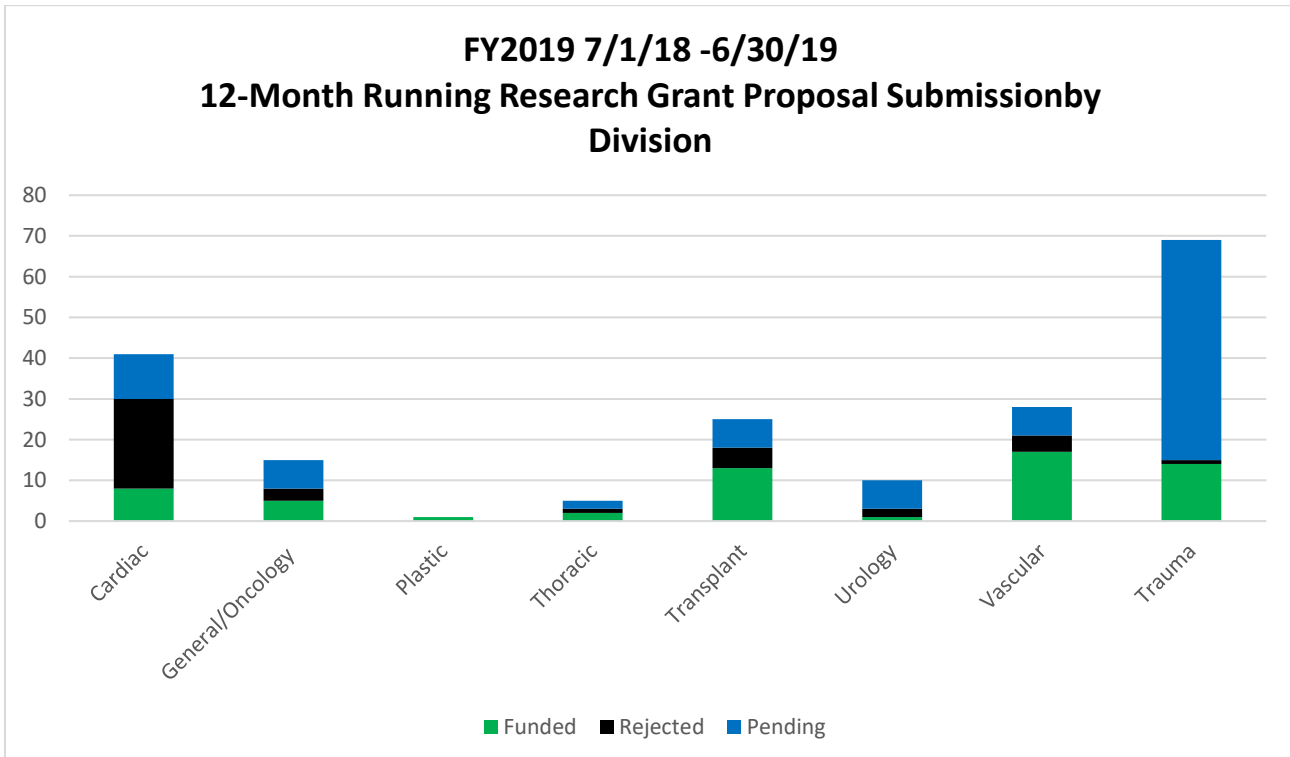


Table 6: FY2019 Grant Proposal Submission by Division



XenoTransplantation Operating Room Renovation

For the Department of Surgery FY2019 was a year for renewal and reinvestment in the research facility on the fourth floor of the Medical School Teaching Facility (MSTF). In the beginning of the fiscal year, after a departure of a large laboratory, there was a mass migration of labs to make way for the construction of the new Cardiac Xenotransplantation Surgical Suite. The new renovation would assume 1,769 square feet of lab, storage and cold room space from the north corridor. Construction began late summer 2018 and was completed in May 2019. A ribbon cutting ceremony was held June 2019 to officially open the new Surgical Suite. In addition, the department started renovating the entire fourth floor with new drywall and updated signage. A new monitor greets visitors and UMB personnel to the fourth floor highlighting the exciting research occurring in the Department of Surgery. The Department is now working on updating the original surgical suites and creating a large equipment storage space next to the surgical suites.

This major project to build new large animal ORs and a primate ICU was completed with a grant and contract from United Therapeutics. The new facilities greatly enhance the department's ability to perform highly complex and novel operative procedures, such as the XenoHeart Transplant Project.

Below is a picture from the ribbon cutting ceremony.



EDUCATION -

Strong match with class of interns for FY 2020 from the following programs: Rutgers, University of Illinois, Thomas Jefferson, and Johns Hopkins.

Incoming Preliminary General Surgery Residents matched from the following programs: University of Belgrade Faculty of Medicine, Medizinische Universität Wien, Università degli Studi di Pavia Facoltà di Chirurgia, People's Friendship University of Russia Faculty of Medicine, Marshall University Joan C. Edwards SOM, and American University of College of Medicine

Our graduating FY2019 class matched into the following fellowships:

- University of Pittsburgh – Plastic Surgery
- University of Texas-San Antonio-Plastic Surgery
- University of St. Louis – Colorectal Surgery
- Duke University-Vascular Surgery
- University of Miami-Surgical Oncology
- University of Wisconsin- Minimally Invasive Surgery

Medical Student shelf exam scores of 56th percentile nationally.

WOMEN IN SURGERY-

The Department of Surgery held two events in AY19. Our event in the fall of 2018 invited guest speaker, Michele Mehrling, MBA, Senior Administrator for the Department of Surgery, who gave a presentation titled “Navigating and Negotiating Your First Big Job! It was well attended by both residents and departmental faculty. In the spring of 2019, we conducted a CV building workshop for our general surgery residents. We had over 15 department faculty volunteer their time to conduct this session with the residents. It was well attended by both the female and male residents within the department and was highlighted as being a success amongst all that were in attendance.

SPONSORED LECTURES AND SYMPOSIUMS

- Joseph B. Ganey Visiting Professorship in Surgery – September 20, 2018 – Breast Reconstruction in the Setting of Radiation Therapy, the MSKCC Approach, presented by Dr. Joseph J. Disa, M.D., Professor of Surgery, Memorial Sloan-Kettering Cancer Center, New York, NY
- Dr. Kristen Stueber Distinguished Lectureship – November 1, 2018 – “The Next Step: Building Local Capacity” & “Around the World on a Scalpel”, presented by Dr. Kristen

Stueber, M.D., Tufts University, Boston, MA and Dr. Nelson Goldberg, MD, FACS, University of Maryland, School of Medicine.

- Dr. Robert W. Buxton Lecture & Symposium – June 20, 2019 – “Latina Surgeon-in-Chief: enduring the Journey in Academic Leadership”, Omaidia C. Velazques, M.D., FACS, Professor and Chair, DeWitt Daughtry Family Department of Surgery, University of Miami Leonard M. Miller School of Medicine.

FY2019 FACULTY RECRUITMENTS:

- The Cardiac Surgery Division added Ronson Madathil, M.D. to take the position vacated by Dr. Zackary Kon. Dr. Madathil received his medical degree from the University of Pittsburgh, School of Medicine, Pittsburgh, PA and completed his intern and residency in General Surgery at the University Hospitals Case Medical Center, Cleveland, OH. He completed his Thoracic Surgery Residency at the University of California Los Angeles, CA and his Cardiothoracic Surgical Critical Care Fellowship at the University of Washington Medical Center, Seattle, WA. Prior to joining the University of Maryland, Dr. Madathil Kaczorowski was completing his Advanced Surgical Fellowship in Cardiothoracic Transplantation and Mechanical Support at the Brigham and Women’s Hospital, Boston, MA.
- The General and Surgical Oncology Division added Richard Birkett, M.D. to take the position vacated by Dr. Jon Chun. Dr. Birkett received his medical degree from Drexel University College of Medicine, Philadelphia, PA and completed his intern and residency in General Surgery at the Lahey Hospital and medical Center, Burlington, MA. Prior to joining the University of Maryland, Dr. Birkett was completing a Clinical Fellowship Program in Colon and Rectal Surgery at the University of Pennsylvania, Philadelphia,
- The General and Surgical Oncology Division added Suliat Nurudeen, M.D., MPH to take the position vacated by Dr. Susan Kesmodel. Dr. Nurudeen received her medical degree from Texas A&M Health Science Center – College of Medicine, Bryan, TX and completed her intern and residency in General Surgery at the Brigham and Women’s Hospital, Boston, MA. She received her Clinical Fellowship in Surgery from Harvard Medical School, Boston, MA. Prior to joining the University of Maryland, Dr. Nurudeen was completing a Breast Surgery Oncology Fellowship Program at MD Anderson Cancer Center, Houston, TX.
- The Transplant Division added Talal Al-Qaoud, M.B., Ch.B. to take the position vacated by Dr. Sam Sultan. Dr. Al-Qaoud received his medical degree from the University of Manchester, UK. He then completed an Internship/ Assistant Registrar in General Surgery at the Kuwait Ministry of Health Hospitals and completed his residency in Urology at McGill University Health Center, Canada. Prior to joining the University of Maryland, Dr. Al-Qaoud was completing a Transplant Surgery Fellowship Program at the University of Wisconsin.

- The Transplant Division added Stephen Gray, M.D. to take the position vacated by Dr. Stephen Hanish. Dr. Gray received his medical degree from the University of Michigan. He then completed a General Surgery Residency, a NRSA Postdoctoral Fellowship, Health Services and Outcomes Research and an Abdominal Organ Transplant Fellowship at the University of Alabama at Birmingham. Prior to joining the University of Maryland, Dr. Gray was an Associate Professor of Surgery with tenure at the University of Alabama at Birmingham.
- The Urology Division added Rena Malik, M.D. to a new role to reenergize the women Urology program in the division. Dr. Malik received her medical degree from New York University. She completed her residency in the Department of Surgery, Section of Urology at the University of Chicago, Chicago, IL. Prior to joining the University of Maryland, Dr. Malik was completing a Fellowship Program at the Department of Urology, Female Pelvic Medicine and Reconstructive Surgery at the University of Texas Southwestern Medical Center, Dallas, TX.
- The Vascular Surgery Division added Sarasijhaa Desikan, M.D. to an expanded role. Dr. Desikan received her medical degree from the University of Arkansas for Medical Sciences, Little Rock, AR. She completed an Integrated Residency Program in Vascular Surgery and was an administrative chief resident in Vascular Surgery at the University of Washington Medical Center, Seattle, WA prior to joining the University of Maryland
- The Vascular Surgery Division added David Glitlitz, M.D. to an expanded role. Dr. Glitlitz received his medical degree from the New York University School of Medicine. He completed a General Surgery Residency at the Albert Einstein College of Medicine, Montefiore Medical Center. He completed a Vascular Surgery Fellowship at Mount Sinai Medical Center, N.Y. Prior to joining the University of Maryland Dr. Glitlitz held various positions at Mount Sinai School of Medicine and Montefiore Medical Center but moved to private practice in 2014 and worked in Maryland at Maryland Vein Professional and Vascular Access Centers – PVI.
- The Vascular Surgery Division added Wei Li, M.D. to an expanded role. Dr. Li received his medical degree from Tianjin Medical University Cancer Institute and Hospital, Tianjin, China. He received a Master of Public Health from the School of Medicine & School of Management at Yale University, New Haven, Connecticut. He completed his Preliminary Surgery Intern PGY-1 in the General Surgery Residency Program, SUNY Upstate Medical University, Syracuse, N.Y. He then completed his categorical Residency at New York Methodist Hospital General Surgery Residency Program. Where he was the Administrative Chief Resident. Dr. Li completed a Vascular Surgery Fellowship at the University of Pittsburgh Medical Center, Pittsburgh, PA. Prior to joining the University of Maryland, Dr. Li was an Associate Professor of Surgery at the Albert Einstein College of Medicine Montefiore Medical Center, Bronx, N.Y.

FY2019/FY2020 DEPARTURES:

Name	Division/Program
Stephen Bartlett, M.D.	Transplant Surgery
Richard Birkett, M.D.	General & Oncologic Surgery
Eleanor Faherty, M.D.	General & Oncologic Surgery
Hope Jackson, M.D.	General & Oncologic Surgery
Lan Liu, Ph.D.	General & Oncologic Surgery
Meghan Milburn, M.D.	General & Oncologic Surgery
Talal Al-Qaoud, M.B., Ch.B.	Transplant Surgery
David Bruno, M.D.	Transplant Surgery
Steven Hanish, M.D.	Transplant Surgery
Andrew Kramer, M.D.	Urology
Tanya Flores, M.D.	Vascular Surgery

Baltimore 2019 Best Doctors:

Emily Bellavance	Breast Surgery
James Gammie	Cardiac Surgery: Mitral Valve /Aortic Valve /Coronary Artery Bypass
Andrea Bafford	Colo-Rectal Surgery
Stephen Kavic	General Surgery
Sunjay Kaushal	Pediatric Cardiac Surgery
Eric Strauch	Pediatric Surgery
James Moore	Pediatric Surgery
Roger Voigt	Pediatric Surgery
Roger Voigt	Pediatric Urology Surgery
Sheri Slezak	Plastic Surgery: Reconstructive
Yvonne Rasko	Plastic Surgery: Reconstructive
Mohammad Siddiqui	Prostate Cancer Surgery

Nader Hanna	Surgical Oncology
Gavin Henry	Thoracic Surgery
Shamus Carr	Thoracic Surgery
Shelby Stewart	Thoracic Surgery
Whitney Burrows	Thoracic Surgery
Andrew Kramer	Urology
Michael Phelan	Urology
Rajabrata Sarkar	Vascular Surgery

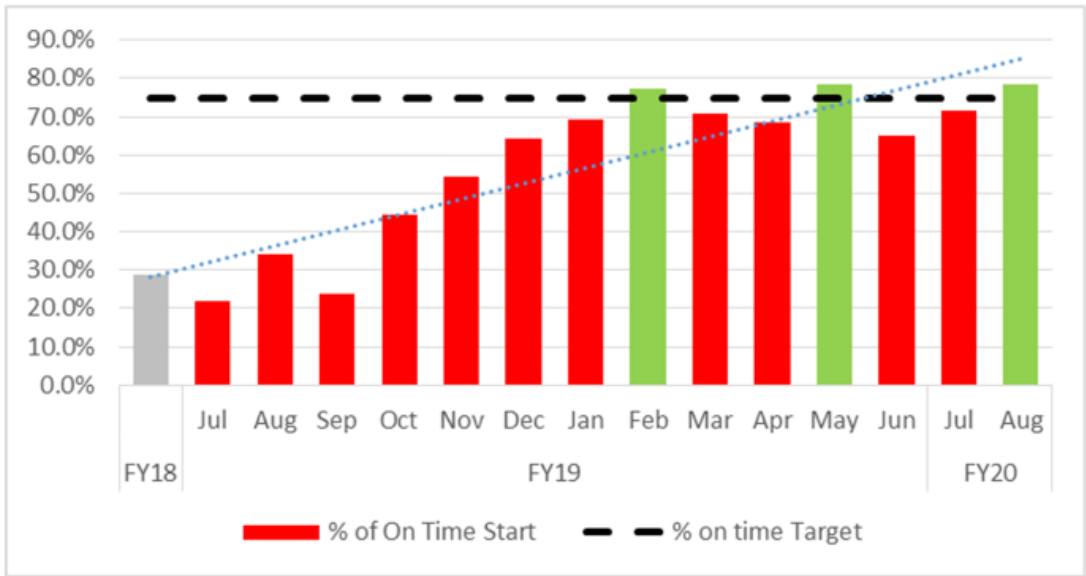
DIVISION ACCOMPLISHMENTS:

Cardiac Surgery

- Bartley P. Griffith, MD will serve as faculty on the American Association for Thoracic Surgery’s 2019 Mechanical Support for the Heart and Lung Symposium. He was chosen to present the prestigious C. Walton Lillehei Lecture for the upcoming 2020 Society of Thoracic Surgeons (STS) meeting in New Orleans.
- Bradley S. Taylor, MD was named Program Director of the Eastern Cardiothoracic Surgical Society (ECTSS). He was promoted to Professor of Surgery. Dr. Taylor was inducted into the American Association of Thoracic Surgery (AATS). He is the principal investigator for the ARISE Evaluation of the GORE Ascending Stent Graft in the Treatment of aortic dissection and for the RelayBranch Thoracic Stent-Graft System Study.
- Sunjay Kaushal, MD, PhD was promoted to the Rank of Tenured Professor in the Department of Surgery.
- Kristopher “Barry” Deatrck, MD was promoted to the Rank of Assistant Professor in the Department of Surgery.
- David Kaczorowski, MD was promoted to the Rank of Associate Professor and was named Director of Cardiac Transplantation and Mechanical Circulatory Support. He participated in the American Association of Thoracic Surgery Leadership Academy.
- Mehrdad Ghoreishi, MD joined the faculty as an Assistant Professor as of August 1, 2019. Dr. Ghoreishi has completed the 6-year Integrated Cardiothoracic Surgery training program at the University of Maryland. He was named as the prestigious Denton Cooley Fellow by the American Association of Thoracic Surgery

- Niv Ad, MD is the new Editor of the Journal *Innovations* – The Journal of International Society for Minimally Invasive Cardiothoracic Surgery (ISMICS) and is President of ISMICS. He has been appointed Adjunct Professor in the Division of Cardiac Surgery.
- Sari Holmes, PhD joined the Division of Cardiac Surgery’s faculty as an Assistant Professor She serves as Managing Editor of the Journal *Innovations*.
- Hassan Tetteh, MD received an honorary Doctor of Science Degree from the State of University of New York (SUNY) Board of Trustees.
- Rawn Salenger, MD was named the Co-Vice Chair of the Maryland Health Care Commission Cardiac Services Advisory Committee.
- James S. Gammie, MD served as lead on protocol development for the National Heart, Lung and Blood Institute (NHLBI) - sponsored Cardiothoracic Surgical Trials Network (CTSN) Trial – Evaluating the benefit of concurrent tricuspid valve repair during mitral surgery. He was named to the Steering Committee of the CTSN. The Division’s Clinical Research Unit enrolled 39 patients and was #1 in the United States in enrollment in this pivotal randomized trial for evaluating the benefit of concurrent tricuspid valve repair during mitral surgery. The 2-year endpoint will be presented in 2021.
- Chetan Pasrija, MD (R-4) published a seminal manuscript demonstrating benefits of ECMO for patients with massive pulmonary embolism (PE) – “Utilization of Venous-Arterial Extracorporeal Membrane Oxygenation for Massive Pulmonary Embolism” in the February issue of the *Annals of Thoracic Surgery*.
- The Multidisciplinary Mitral Valve Team is poised to perform the 100th transcatheter mitral valve MitraClip repair. The team contributed to the randomized COAPT Study which demonstrated a dramatic improvement in survival and symptoms in patients treated with MitraClip.
- The ECMO program is the 2nd largest program in the United States and is on target to support over 200 patients in CY2019.
- Drs. Griffith and Kaushal, together, performed the 1st pediatric Heart-Lung transplant.
- Cardiac Surgery is now the home of the Journal – *Innovations – Technology and Techniques in Cardiothoracic and Vascular Surgery*. *Innovations* is the official Journal of the International Society for Minimally Invasive Cardiothoracic Surgery (ISMICS).
- Total Cases performed in the Division are up 4% YOY.
- The Thoracic Surgery Foundation announced the “Top 20” Institutional Honor Roll. The Division of Cardiac Surgery is #17 with a total funding of \$325,000.
- Dr. Kaushal is currently in Phase I of the ELPIS trial using mesenchymal stem cells for hypoplastic left heart syndrome in infants.
- Working with Leaders in Perioperative Services and TogetherMD, team members from the Division have dramatically improved on-time first start performance in the cardiac operating rooms. Average case end time of day has improved by 30 minutes:

On-Time First Case Start
 Desired target is 75% or more of all first cases with start (wheels in) on time; On-time is defined as 6:45 on Monday, Tuesday, Wednesday, Friday and 8:30 on Thursdays. ***Report excludes OR N34 & All Pediatric Cases (under 18)



General SurgOnc

Jonathan Pearl, MD was named the Department Head of General Surgery at the University of Maryland Midtown campus. He has grown Midtown General Surgery volume by 16% year over year. Dr. Pearl recruited a General Surgeon Faculty member to the Division. He received a score on R21 submission with resubmission planned for fall. Dr. Pearl continues to maintain an active clinical and administrative role at the VA. He had 2 publications in FY19.

Stephen Kavic, MD had another excellent match, selecting 6 new interns from 1,500 applicants. There was a 100% match rate through the match. All the residents matched into competitive fellowships in 5 specialties (Colorectal, MIS, Plastics, Surgical Oncology, and Vascular). Again, this year, all the graduates passed the written board of surgery on their first attempt. Dr. Kavic was an invited speaker at the American College of Surgeons Conference, the Academic Surgical Congress, and at the Association of Surgical Education Conference. He had 6 publications in FY19

Nariman Balenga, PhD received the Early Career Award in Translational and Clinical Pharmacology. He has 2 active grants, the most recent awarded 12/1/18. Dr. Balenga was an invited speaker at the UMMC, School of Pharmacy. He presented at the UMMC Greenebaum Comprehensive Cancer Center and at the Experimental Biology Conference in Orlando, Florida. Dr. Balenga has 2 publications in FY19.

Andrea Bafford, MD was named Chief of Colorectal Surgery Section. She was an invited speaker at the American College of Surgeons annual conference where she spoke on Crohn’s disease. Dr. Bafford had 7 publications in FY19.

Cherif Boutros, MD was recognized as a fellow of the American College of Gastroenterology (FACG) and also elected to the Board of Directors of Maryland Patient Safety Center. He received 2 awards, Reviewer excellence award, Association for Academic Surgery, and the Circle of Honor award, Maryland Patient Safety Center. Dr. Boutros was an invited speaker at the Association of periOperative Registered Nurses conference, and he presented at the UMMC, Third Annual Minimally Invasive Cancer Care Symposium. He recruited two Medical Oncologist and one Radiation Oncologist to the Tate Cancer Center. He organized the Third Annual Minimally Invasive Cancer Care Symposium at the Tate Cancer Center. He is currently serving as PI for 17 clinical trials and is Chairman of the UMMS colorectal and gastrointestinal surgery committee. He serves on the Editorial Board, Journal of Surgical research and SURGERY. Dr. Boutros had 3 publications in FY19.

John A. Olson, MD, PhD currently has 4 active grants, the most recent awarded 12/1/18. He was the invited speaker at the University of Florida, MD-PhD Program Distinguished Alumnus Lecture. In March he presented at University of Florida, Cancer Center Grand Rounds. He was an invited speaker at the Society of Surgical Oncology and also at the University of Alabama. Dr. Olson had 4 publications in FY19.

Douglas Turner, MD serves on the Federal Advisory Committee for Scientific Merit Review. This past year he started a new MERIT grant. He was awarded a new patent. Dr. Turner had 3 publications in FY19.

Emily Bellavance, MD was promoted to Associate Professor of Surgery and also voted “TOP DOC” in the Baltimore Magazine. Dr. Bellavance had 2 publications in FY19.

Richelle Williams, MD served on the Society of Surgical Oncology Branding Task Force Committee with roll out of new brand at the national meeting in March. She presented at the SSO meeting on research about the effect of volume in complex surgical oncology. Dr. Williams was inducted as Fellow of the American College of Surgeons. She served as Young Fellow on the executive council of the Maryland ACS Chapter and also organized and moderated a session for students, residents, and fellows at the annual meeting of Maryland ACS. Dr. Williams had 2 peer reviewed publications in FY19.

Suliat Nurudeen, MD has completed her first year in clinical practice as a University of Maryland faculty member. She has taken on the role of faculty advisor for the Women in Surgery resident interest group providing mentorship and guidance for female residents. She was an invited lecturer at the first Polish American Breast Cancer Conference in Warsaw, Poland where she delivered multiple lectures on current advancement in breast surgical care. She had one publication in FY19 on contemporary axillary management in breast cancer patients.

Mark Kligman, MD was promoted to Associate Professor of Surgery. He was also awarded the Senior Faculty Teacher of the Year 2019. Dr. Kligman received 2 grants and had 5 publications in FY19.

Pediatric Surgery

- The Division has a 5% growth in surgical cases and a 12% increase in office visits
- Dr. Voigt worked with Heidi Minken and Dr. Strauch’s family to secure a \$2.5 million funding commitment for the Leonard Topper Distinguished Professorship in Pediatric Surgery.

- 3 division surgeons named on the Baltimore Magazines List of Top Doctors - Moore, Strauch and Voigt
- Kimberly Lumpkins, MD promoted to Associate Professor
- Kim Lumpkins elected president of Women in Medicine and Science and recipient of the 2019 Student Council Award for Best Clinical Faculty
- Recruited a new faculty member to start late September 2019, Dr. Brian Englum

Plastic Surgery



The Plastic Surgery division had a continued strong clinical performance, with over 850 cases performed by our four staff surgeons at UMMC, Midtown, Easton, BWMC, Chester River, and GBMC. We deliver Maryland level care not only here, but in locations throughout the state with follow up close to home. We offer specialized clinics for pediatric plastic surgery, breast reconstruction, complex abdominal wall hernias, and transplantation panniculectomies as well as a full range of routine reconstructive and aesthetic plastic surgery problems.

Dr Slezak was appointed as the Vice Chair of Faculty Affairs for surgery in December and had been appointed to the Dean's Cultural Transformation Task Force. She is on the Residency Review Committee at ACGME for plastic surgery and is an oral board examiner. Dr Nelson Goldberg also has significant leadership positions as the Chief of Surgery at Shore Medical Center at Chestertown, the Director of the Wound Center at BWMC and an oral board examiner.

Dr Rasko has pushed the research program in our division to a new level, creating a highly successful program through a philanthropy gift from alumna Dr. Kristin Stueber. This has allowed us to fund a 2 year resident level research position and 4 summer students, which we call Stueber scholars. Their projects and manuscripts for the summer include:

2019 - Shan Xue

Manuscripts

1. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, O'Brien-Coon D, Berli JU, Rasko YM. The State of Insurance Coverage of Ancillary Gender Affirming Surgeries in the United States. *Plast Reconstr Surg.* (Submitted June 2019)
2. Xue S, Ngaage LM, Rada EM, Rasko YM. Insurance Reform for Gender-Affirming Healthcare. (In prep)
3. Xue S, Ngaage LM, Rada EM, Rasko YM. Nasal Composite Grafts: Case Series. (In prep)
4. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, Rasko YM. Insurance Coverage Patterns for Panniculectomy. (In prep)
5. Ngaage LM, Wu Y, Xue S, Knighton B, McGlone KL, Rawes C, Tullie S, Benzel C, Baglien B, Taylor M, Rada EM, Rasko YM. Gender disparity in industry contributions to academic orthopaedic surgeons. (In prep)
6. Ngaage LM, Xue S, Masters B, Niederhaus SV, Bromberg JS, Rasko YM. A case-control study of concurrent panniculectomy-living donor renal transplant. (In prep)
7. Ngaage LM, Xue S, Rawes C, Andrews A, Rasko YM. The Ortho Match: Defining the Academic Profile of Successful Candidates. (In prep)

Abstracts

1. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, Coon D, Berli JU, Rasko YM. Insurance Coverage of Ancillary Gender Reassignment Surgeries in the United States. *American Society of Plastic Surgeons.* 2019.

Presentations

1. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, Rasko YM. Insurance Coverage of Ancillary Gender Reassignment Surgeries in the United States. *American Society of Plastic Surgeons, San Diego CA, Oral presentation, 22nd Sept 2019.*

2019 - Caroline Benzel

Manuscripts

1. Ngaage LM, Knighton B, Benzel C, McGlone K, Rada EM, O'Brien-Coon D, Bluebond-Langner R, Rasko YM. A review of insurance coverage of gender affirming genital surgery. *Plast Reconstr Surg.* (Accepted July 2019)
2. Ngaage LM, Knighton B, McGlone K, Benzel C, Rada EM, Bluebond-Langner R, Rasko YM. Health insurance coverage of gender-affirming top surgery in the United States. *Plast Reconstr Surg.* (Accepted April 2019)
3. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, O'Brien-Coon D, Berli JU, Rasko YM. The State of Insurance Coverage of Ancillary Gender Affirming Surgeries in the United States. *Plast Reconstr Surg.* (Submitted June 2019)
4. Ngaage LM, Wu Y, Xue S, Knighton B, McGlone KL, Rawes C, Tullie S, Benzel C, Baglien B, Taylor M, Rada EM, Rasko YM. Gender disparity in industry contributions to academic orthopaedic surgeons. (In prep)

Abstracts

1. Ngaage LM, Knighton B, McGlone K, Benzel C, Rada EM, Bluebond-Langner R, Rasko YM. Health insurance coverage of gender-affirming top surgery in the United States. *PRS Global Open*. 2019.

2. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, Coon D, Berli JU, Rasko YM. Insurance Coverage of Ancillary Gender Reassignment Surgeries in the United States. *American Society of Plastic Surgeons*. 2019.

Presentations

1. Ngaage LM, Knighton B, McGlone K, Benzel C, Rada EM, Bluebond-Langner R, Rasko YM. Health insurance coverage of gender-affirming top surgery in the United States. 12th Annual Johns Hopkins 2019 Women's Health Research Symposium, Baltimore MD, Poster presentation, 13th May 2019.

2. Ngaage LM, Knighton B, McGlone K, Benzel C, Rada EM, Bluebond-Langner R, Rasko YM. Health insurance coverage of gender-affirming top surgery in the United States. *American Society of Plastic Surgeons*, San Diego CA, Oral presentation, 20th Sept 2019.

3. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, Rasko YM. Insurance Coverage of Ancillary Gender Reassignment Surgeries in the United States. *American Society of Plastic Surgeons*, San Diego CA, Oral presentation, 22nd Sept 2019.

2019 - Katie McGlone

Manuscripts

1. Ngaage LM, Knighton B, Benzel C, McGlone K, Rada EM, O'Brien-Coon D, Bluebond-Langner R, Rasko YM. A review of insurance coverage of gender affirming genital surgery. *Plast Reconstr Surg*. (Accepted July 2019)

2. Ngaage LM, Knighton B, McGlone K, Benzel C, Rada EM, Bluebond-Langner R, Rasko YM. Health insurance coverage of gender-affirming top surgery in the United States. *Plast Reconstr Surg*. (Accepted April 2019)

3. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, O'Brien-Coon D, Berli JU, Rasko YM. The State of Insurance Coverage of Ancillary Gender Affirming Surgeries in the United States. *Plast Reconstr Surg*. (Submitted June 2019)

4. Ngaage LM, Elegbede A, McGlone KL, Knighton BJ, Cooney C, Cooney D, Lifchez SD, Slezak S, Rasko YM. Integrated Plastic Surgery Match: Trends in Research Productivity of Successful Candidates. *Plast Reconstr Surg*. (Submitted July 2019)

5. Ngaage LM, Messner F, McGlone KL, Masters BM, Highstein M, Chopra K, Rada EM, Phelan M, Singh D, Scalea JR, Niederhaus SV, Bromberg JS, Bartlett ST, Rasko YM. A Multidisciplinary Approach to Concurrent Panniculectomy-Living Donor Renal Transplant. *Ann Plast Surg*. (Submitted August 2019)

6. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, Rasko YM. Insurance Coverage Patterns for Panniculectomy. (In prep)

7. Ngaage LM, Wu Y, Xue S, Knighton B, McGlone KL, Rawes C, Tullie S, Benzel C, Baglien B, Taylor M, Rada EM, Rasko YM. Gender disparity in industry contributions to academic orthopaedic surgeons. (In prep)

8. Ngaage LM, Crabill GA, McGlone K, Knighton B, Rasko YM. Understanding the safety and efficacy of geriatric paraspinous flaps. (In prep)
9. Ngaage LM, McGlone K, Knighton B, Crabill GA, Rasko YM. A cost analysis of prophylactic vs salvage flaps in paraspinous reconstruction. (In prep)
10. McGlone K, Ngaage LM, Rada, Rasko YM. A bibliometric analysis of fellowship applicants in plastic surgery. (In prep)

Abstracts

1. Ngaage LM, Knighton B, McGlone K, Benzel C, Rada EM, Bluebond-Langner R, Rasko YM. Health insurance coverage of gender-affirming top surgery in the United States. PRS Global Open. 2019.
2. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, Coon D, Berli JU, Rasko YM. Insurance Coverage of Ancillary Gender Reassignment Surgeries in the United States. American Society of Plastic Surgeons. 2019.

Presentations

1. Ngaage LM, Knighton B, McGlone K, Benzel C, Rada EM, Bluebond-Langner R, Rasko YM. Health insurance coverage of gender-affirming top surgery in the United States. 12th Annual Johns Hopkins 2019 Women's Health Research Symposium, Baltimore MD, Poster presentation, 13th May 2019.
2. Ngaage LM, Knighton B, McGlone K, Benzel C, Rada EM, Bluebond-Langner R, Rasko YM. Health insurance coverage of gender-affirming top surgery in the United States. American Society of Plastic Surgeons, San Diego CA, Oral presentation, 20th Sept 2019.
3. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, Rasko YM. Insurance Coverage of Ancillary Gender Reassignment Surgeries in the United States. American Society of Plastic Surgeons, San Diego CA, Oral presentation, 22nd Sept 2019.

2019 - Brooks Knighton

Manuscripts

1. Ngaage LM, Knighton B, Benzel C, McGlone K, Rada EM, O'Brien-Coon D, Bluebond-Langner R, Rasko YM. A review of insurance coverage of gender affirming genital surgery. Plast Reconstr Surg. (Accepted July 2019)
2. Ngaage LM, Knighton B, McGlone K, Benzel C, Rada EM, Bluebond-Langner R, Rasko YM. Health insurance coverage of gender-affirming top surgery in the United States. Plast Reconstr Surg. (Accepted April 2019)
3. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, O'Brien-Coon D, Berli JU, Rasko YM. The State of Insurance Coverage of Ancillary Gender Affirming Surgeries in the United States. Plast Reconstr Surg. (Submitted June 2019)
4. Ngaage LM, Elegbede A, McGlone KL, Knighton BJ, Cooney C, Cooney D, Lifchez SD, Slezak S, Rasko YM. Integrated Plastic Surgery Match: Trends in Research Productivity of Successful Candidates. Plast Reconstr Surg. (Submitted July 2019)
5. Gebran SG, Knighton B, Ngaage LM, Rose JA, Grant MP, Liang F, Nam AJ, Kavic SM, Kligman MD, Rasko YM. Insurance Coverage Criteria for Bariatric Surgery – A Survey of Policies. Obes Surg. (Submitted July 2019)

6. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, Rasko YM. Insurance Coverage Patterns for Panniculectomy. (In prep)
7. Ngaage LM, Wu Y, Xue S, Knighton B, McGlone KL, Rawes C, Tullie S, Benzel C, Baglien B, Taylor M, Rada EM, Rasko YM. Gender disparity in industry contributions to academic orthopaedic surgeons. (In prep)
8. Ngaage LM, Crabill GA, McGlone K, Knighton B, Rasko YM. Understanding the safety and efficacy of geriatric paraspinous flaps. (In prep)
9. Ngaage LM, McGlone K, Knighton B, Crabill GA, Rasko YM. A cost analysis of prophylactic vs salvage flaps in paraspinous reconstruction. (In prep)
10. Ngaage LM, Knighton B, Stewart T, Rasko YM. Follow the money: Investigating gender disparity in academic leaders of plastic surgery. (In prep)
11. Ngaage LM, Knighton B, Rawes C, Rasko YM. Digital footprint of academic plastic surgeons. (In prep)
12. Knighton B, Ngaage LM, Rasko YM. Risk factors for incisional hernia in the post-transplant population: A Case Series. (In prep)
13. Knighton B, Ngaage LM, Rasko YM. Insurance Coverage of Paediatric Bariatric Surgery. (In prep)

Abstracts

1. Ngaage LM, Knighton B, McGlone K, Benzel C, Rada EM, Bluebond-Langner R, Rasko YM. Health insurance coverage of gender-affirming top surgery in the United States. PRS Global Open. 2019.
2. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, Coon D, Berli JU, Rasko YM. Insurance Coverage of Ancillary Gender Reassignment Surgeries in the United States. American Society of Plastic Surgeons. 2019.

Presentations

1. Ngaage LM, Knighton B, McGlone K, Benzel C, Rada EM, Bluebond-Langner R, Rasko YM. Health insurance coverage of gender-affirming top surgery in the United States. 12th Annual Johns Hopkins 2019 Women's Health Research Symposium, Baltimore MD, Poster presentation, 13th May 2019.
2. Ngaage LM, Knighton B, McGlone K, Benzel C, Rada EM, Bluebond-Langner R, Rasko YM. Health insurance coverage of gender-affirming top surgery in the United States. American Society of Plastic Surgeons, San Diego CA, Oral presentation, 20th Sept 2019.
3. Ngaage LM, McGlone K, Xue S, Benzel C, Knighton B, Rada EM, Rasko YM. Insurance Coverage of Ancillary Gender Reassignment Surgeries in the United States. American Society of Plastic Surgeons, San Diego CA, Oral presentation, 22nd Sept 2019.
4. Gebran SG, Knighton B, Ngaage LM, Rose JA, Grant MP, Liang F, Nam AJ, Kavic SM, Kligman MD, Rasko YM. Insurance Coverage Criteria for Bariatric Surgery – A Survey of Policies. American Society for Metabolic and Bariatric Surgery, Las Vegas NV, Oral Presentation, 6th Nov 2019.



Teaching is a priority for our division. We celebrated the 30th year of our combined Maryland-Hopkins Plastic Surgery training program-the longest history in the country. It is also one of the largest in the US, with 31 residents at 8 hospitals in the Maryland area. Residents have presented their research at all of the major plastic surgery meetings in the last year.

Selected papers published by faculty and residents in the past year:

Panniculectomy at the time of living donor renal transplantation: An 8-year experience. Ngaage LM, Elegbede A, Tadisina KK, Gebran SG, Masters BM, Rada EM, Nam AJ, Scalea JR, Niederhaus SV, Singh D, Bromberg JS, Bartlett ST, Rasko YM. *Am J Transplant*. 2019 Aug;19(8):2284-2293.

Postoperative Outcomes in Obese Patients That Undergo Ventral Hernia Repair versus Ventral Hernia Repair with Concurrent Panniculectomy. Diaconu SC, McNichols CHL, AlFadil S, Liang Y, Bai J, Silverman RP, Grant MP, Nam AJ, Rasko YM. *Plast Reconstr Surg*. 2019 Apr;143(4):1211-1219.

An Update on Measures of Preoperative Glycemic Control. Ngaage LM, Osadebey EN, Tullie STE, Elegbede A, Rada EM, Spanakis EK, Goldberg N, Slezak S, Rasko YM. *Plast Reconstr Surg Glob Open*. 2019 May 16;7(5):e2240.

Longevity of Outcomes Following Reduction Mammoplasty. Bai J, Rosen CM, Ngaage LM, McNichols CHL, Diaconu SC, Ihenatu C, Elegbede A, Bellavance EC, Slezak SS, Rasko YM. *Eplasty*. 2019 Jul 23;19:e18. eCollection 2019.

Plastic and Reconstructive Surgeons' Knowledge and Comfort of Contralateral Prophylactic Mastectomy: A Survey of the American Society of Plastic Surgeons. Lopez CD, Bluebond-Langner R, Houssock CA, Slezak SS, Bellavance E. *Front Oncol*. 2019 Jan 9;8:647.

Survival following Self-Inflicted Gunshots to the Face. Elegbede A, Wasicek PJ, Mermulla S, Dunlow R, Rasko YM, Aarabi B, Liang F, Grant MP, Nam AJ. *Plast Reconstr Surg*. 2019 Aug;144(2):415-422.

A 12-year review of patient-reported outcomes after reduction mammoplasty in patients with high body mass index. Ngaage LM, Bai J, Gebran S, Elegbede A, Ihenatu C, Nam AJ, Slezak S, Rasko YM. *Medicine (Baltimore)*. 2019 Jun;98(25):e16055.

Surgical Management of Gynecomastia: A Review of the Current Insurance Coverage Criteria. Rasko YM, Rosen C, Ngaage LM, AlFadil S, Elegbede A, Ihenatu C, Nam AJ, Slezak S. *Plast Reconstr Surg*. 2019 May;143(5):1361-1368.

Closed-incision negative-pressure therapy decreases complications in ventral hernia repair with concurrent panniculectomy. Diaconu SC, McNichols CHL, Ngaage LM, Liang Y, Ikheloa E, Bai J, Grant MP, Nam AJ, Rasko YM. *Hernia*. 2018 Dec 17.

Negative Pressure Wound Therapy with Instillation and Dwell Time in the Surgical Management of Severe Hidradenitis Suppurativa. Ge S, Orbay H, Silverman RP, Rasko YM. *Cureus*. 2018 Sep 17;10(9):e3319.

Performance on the Plastic Surgery In-Service Examination Can Predict Success on the American Board of Plastic Surgery Written Examination. Giroto JA, Adams NS, Janis JE, Brandt KE, Slezak SS. *Plast Reconstr Surg*. 2019 May;143(5):1099e-1105e.

Investigating the Gender Pay Gap in Industry Contributions to Academic Neurosurgeons. Ngaage LM, Harris C, Gao C, Puthumana J, Crabill GA, Baglien B, Wu Y, Rosen C, Rada EM, Groves M, Sansur CA, Rasko YM. *World Neurosurg*. 2019 Jun 26.

A Review of National Insurance Coverage of Post-bariatric Upper Body Lift. Ngaage LM, Rose J, Pace L, Kambouris AR, Rada EM, Kligman MD, Rasko YM. *Aesthetic Plast Surg*. 2019 Jun 25.

What Do Plastic Surgery Patients Think of Financial Conflicts of Interest and the Sunshine Act? Lopez J, Naved BA, Pradeep T, Pineault K, Purvis T, Macmillan A, Slezak S, May JW Jr, Dorafshar AH. *Ann Plast Surg*. 2019 Jun;82(6):597-603.

Surgical Management of Diastasis Recti: A Systematic Review of Insurance Coverage in the United States. Rosen CM, Ngaage LM, Rada EM, Slezak S, Kavic S, Rasko Y. *Ann Plast Surg*. 2019 Jan 9.

Thoracic Surgery

Book Chapters

Carr S, Friedberg JS. Tracheostomy. *Shield's General Thoracic Surgery, 8th edition*, edited by Donnellan K, Mcguire S, Huffaman B. Philadelphia, Lippincott Williams & Wilkins, 2019

Culligan M, Friedberg JS. Care of the Mesothelioma Patient Undergoing Extended Pleurectomy and Decortication. *Caring for Patients with Mesothelioma: Principles and Guidelines*, edited by Hesdorffer M, Bates-Pappas G. Switzerland, Springer, 2019

DaSilva MC, Sugarbaker P, **Carr SR, Friedberg JS**, Sugarbaker DJ. Intraoperative Adjuncts in the Treatment of Malignant Mesothelioma: Hyperthermic Intraoperative Chemotherapy and Photodynamic Therapy. *Adult Chest Surgery, 3rd ed.* Sugarbaker DJ et al. McGraw-Hill, New York, 2019

Raemondek DV, Decaluwe H, De Leyn P, **Carr SR, Friedberg JS.** Segmentectomy for Primary Lung Cancer. *Adult Chest Surgery, 3rd edition.* Sugarbaker DJ et al. New York, McGraw-Hill, 2019

Events

Shelby Stewart, MD. Johns Hopkins Underrepresented in Medical Professions (JUMP). Keynote Speaker. Johns Hopkins University. Baltimore, Maryland. September 18, 2018.

Shamus Carr, MD, FACS. Lung Cancer: Is it all Smoke? Myths and Facts. Facebook Live Interview. University of Maryland Greenebaum Comprehensive Cancer Center. Baltimore, Maryland. November 20, 2018

Shelby Stewart, MD. Your Health: Advances in Treating Lung Cancer. Television Interview. Maryland Public Television. November 26, 2018

Shamus Carr, MD, FACS. Bootcamp – Cadaver Lab. Lecturer. University of Maryland School of Medicine. Baltimore, Maryland. February 25, 2019

Honors and Awards

Whitney Burrows, MD named one of the “Top Doctors” – October 15, 2018 issue of Baltimore Magazine: “Top Doctors 2018”

Shamus Carr, MD named one of the “Top Doctors” – October 15, 2018 issue of Baltimore Magazine: “Top Doctors 2018”

Gavin Henry, MD named one of the “Top Doctors” – October 15, 2018 issue of Baltimore Magazine: “Top Doctors 2018”

Shelby Stewart, MD named one of the “Top Doctors” – October 15, 2018 issue of Baltimore Magazine: “Top Doctors 2018”

Shamus Carr, MD, FACS received the Bartley P. Griffith Golden Apple Teacher award for his excellence in teaching in FY2019

Invited Speakers/Teachings

Joseph Friedberg, MD, FACS. Stage III Unresectable Non-Small Cell Lung Cancer: Radiation Oncology Focus. Invited Speaker. ASCO Advantage Faculty. Alexandria, Virginia. November 27-28, 2018

Joseph Friedberg, MD, FACS. Updates in Malignant Mesothelioma. Ninth Annual Evaluation and Management of Pleural Disease lecture, Johns Hopkins University School of Medicine. Baltimore, Maryland. January 21, 2019

Joseph Friedberg, MD, FACS. Mesothelioma: How much Surgery is Enough? Moderator. AATS 99th Annual Meeting. Toronto, Canada. May 4, 2019

Presentations

Shamus Carr, MD, FACS Lung Cancer - It is in the Genes. Presented lecture at Grand Rounds, Holy Cross Hospital. Silver Spring, Maryland. August 31, 2018

Shamus Carr, MD, FACS Population-Based Relative Risks for Lung Cancer Based on Complete Family History of Lung Cancer. Oral presentation. IASLC 19th World Conference on Lung Cancer. September 24, 2018

Shamus Carr, MD, FACS Lung Cancer - It is in the Genes. Presented lecture at Resident Grand Rounds, University of Maryland School of Medicine. Baltimore, Maryland. September 27, 2018

Shamus Carr, MD, FACS. Nuss Bar Removal Complicated by Right Ventricle Laceration. Poster presentation. Eastern Cardiothoracic Surgical Society 56th Annual Meeting. Clearwater, Florida. October 19, 2018

Shamus Carr, MD, FACS. Esophagectomy – New Techniques and Complications. Presented at GI Grand Rounds, University of Maryland School of Medicine. Baltimore, Maryland. October 31, 2018

Shamus Carr, MD, FACS. Lung Cancer – It is in the Genes. Presented lecture at Grand Rounds, Upper Chesapeake Health. Bel Air, Maryland. November 29, 2018

Joseph Friedberg, MD, FACS. Newly identified lymph nodes more than double the chance of recurrence and death in patients with malignant pleural mesothelioma. Oral presentation. STS 55th Annual Meeting. San Diego, California. January 29, 2019

Shamus Carr, MD, FACS. Lung Cancer – It is in the Genes. Presented lecture at Grand Rounds, Capital Regional Hospital. Cheverly, Maryland. February 27, 2019

Whitney Burrows, MD. Interventional therapies in severe emphysema. Presented at Surgery Grand Rounds, University of Maryland School of Medicine. Baltimore, Maryland. March 6, 2019

Publications

Carr SR, Akerley W, Cannon-Albright LA. Genetic Contribution to Nonsquamous, Non-Small Cell Lung Cancer in Nonsmokers. *J Thorac Oncol.* 2018 Jul;13(7):938-945. doi: 10.1016/j.jtho.2018.03.024. Epub 2018 Apr 4

Davis RW 4th, Papanavvas E, Klampatsa A, Putt M, Montaner LJ, **Culligan MJ,** McNulty S, **Friedberg JS,** Simone CB 2nd, Singhal, Albelda SM, Cengel KA, Busch TM. A preclinical model to investigate the role of surgically-induced inflammation in tumor responses to intraoperative photodynamic therapy. *Lasers Surg Med.* 2018 Jul;50(5):440-450. doi: 10.1002/lsm.22934. Epub 2018 May 25

Leiter N, Pickering EM, Sangwan YS, **Burrows WM,** **Friedberg JS,** Sachdeva A. Intrapleural Therapy for Empyema in the Setting of a Bronchopleural Fistula: A Novel Use of an Intra-bronchial Valve. *Ann Thorac Surg.* 2018 Sep;106(3):e111-e113. doi:10.1016/j.athoracsur.2018.03.023. Epub 2018 Apr 13

Amin W, Linkov F, Landsittel DP, Silverstein JC, Bashara W, Gaudio C, Feldman MD, Pass HI, Melamed J, **Friedberg JS,** Becich MJ. Factors influencing malignant mesothelioma survival: a retrospective review of the National Mesothelioma Virtual Bank cohort. Version 3. *F1000Res.* 2018 Aug 3 [revised 2019 Jan 1];7:1184. doi: 10.12688/f1000research.15512.3

Verma V, Ahern CA, Berlind CG, Lindsay WD, Shabason J, Sharma S, **Culligan MJ,** Grover S, **Friedberg JS,** Simone CB 2nd. Survival by Histologic Subtype of Malignant Pleural Mesothelioma and

the Impact of Surgical Resection on Overall Survival. *Clin Lung Cancer*. 2018 Nov;19(6):e901-e912. doi:10.1016/j.clcc.2018.08.007. Epub 2018 Aug 29

Schonewolf CA, Heskell M, Doucette A, Singhal S, Frick MA, Xanthopoulos EP, Corradetti MN, **Friedberg JS**, Pechet TT, Christodouleas JP, Levin W, Berman A, Cengel KA, Verma V, Hahn SM, Kucharczuk JC, Rengan R, Simone CB 2nd. Five-year Long-term Outcomes of Stereotactic Body Radiation Therapy for Operable Versus Medically Inoperable Stage I Non-small-cell Lung Cancer: Analysis by Operability, Fractionation Regimen, Tumor Size, and Tumor Location. *Clin Lung Cancer*. 2019 Jan;20(1):e63-e71. doi: 10.1016/j.clcc.2018.09.004. Epub 2018 Sep 20

Rice SR, Molitoris JK, Vyfhuis MAL, Edelman MJ, Burrows WM, Feliciano J, Nichols EM, Suntharalingam M, Donahue J, **Carr SR**, **Friedberg J**, Badiyan S, Simone CB 2nd, Feigenberg SJ, Mohindra P. Lymph Node Size Predicts for Asymptomatic Brain Metastases in Patients With Non-small-cell Lung Cancer at Diagnosis. *Clin Lung Cancer*. 2019 Jan;20(1):e107-e114. doi: 10.1016/j.clcc.2018.09.014. Epub 2018 Sep 24

Tsao AS, Lindwasser OW, Adjei AA, Adusumilli PS, Beyers ML, Blumenthal GM, Bueno R, Burt BM, Carbone M, Dahlberg SE, de Perrot M, Fennell DA, **Friedberg JS**, Gill RR, Gomez DR, Harpole DH Jr, Hassan R, Hesdorffer M, Hirsch FR, Hmeljak J, Kindler HL, Korn EL, Liu G, Mansfield AS, Nowak AK, Pass HI, Peikert T, Rimner A, Robinson BWS, Rosenzweig KE, Rusch VW, Salgia R, Sepesi B, Simone CB 2nd, Sridhara R, Szlosarek P, Taioli E, Tsao MS, Yang H, Zauderer MG, Malik SM. Current and Future Management of Malignant Mesothelioma: A Consensus Report from the National Cancer Institute Thoracic Malignancy Steering Committee, International Association for the Study of Lung Cancer, and Mesothelioma Applied Research Foundation. *J Thorac Oncol*. 2018 Nov;13(11):1655-1667. doi:10.1016/j.jtho.2018.08.2036

Deshpande SP, Chow JH, Odonkor P, Griffith B, **Carr SR**. Misadventures of a Pigtail: Case Report of Accidental Insertion of a Chest Tube Into the Left Atrium During Interventional Radiology-Guided Placement. *A A Pract*. 2018 Nov 15;11(10):273-275. doi: 10.1213/XAA.0000000000000807

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Lee HS, Jang HJ, Lo EM, Truong CY, Groth SS, **Friedberg JS**, Sugarbaker DJ, Burt BM. Povidone-iodine results in rapid killing of thymic epithelial tumour cells through cellular fixation†. *Interact Cardiovasc Thorac Surg*. 2019 Mar 1;28(3):353-359. doi: 10.1093/icvts/ivy248

Bajaj D, Todd N, Hossain R, Mahajan K, **Burrows W**, Sachdeva A. Organizing pneumonia co-existing with carcinoid tumour: complete resolution with bronchoscopic tumour resection. *Respirol Case Rep*. 2019 Mar 7;7(4):e00409. doi:10.1002/rcr2.409. eCollection 2019 May

Berger I, Cengel KA, Simone CB 2nd, Alley EW, Roshkovan L, Haas AR, Patel AM, Khalid U, **Culligan MJ**, McNulty S, Singhal S, **Friedberg JS**, Katz SI. Lymphangitic carcinomatosis: A common

radiographic manifestation of local failure following extended pleurectomy/decortication in patients with malignant pleural mesothelioma. *Lung Cancer*. 2019 Jun;132:94-98. doi: 10.1016/j.lungcan.2019.03.026. Epub 2019 Mar 26

Verma V, Wegner RE, Ludmir EB, Hasan S, Colonias A, Grover S, **Friedberg JS**, Simone CB 2nd. Management of Malignant Pleural Mesothelioma in the Elderly Population. *Ann Surg Oncol*. 2019 Aug;26(8):2357-2366. doi:10.1245/s10434-019-07351-6. Epub 2019 Apr 22

Cannon-Albright LA, **Carr SR**, Akerley W. Population-Based Relative Risks for Lung Cancer Based on Complete Family History of Lung Cancer. *J Thorac Oncol*. 2019 Jul;14(7):1184-1191. doi: 10.1016/j.jtho.2019.04.019. Epub 2019 May 7

Friedberg JS, **Culligan MJ**, Tsao AS, Rusch V, Sepesi B, Pass HI, Bueno R, Burt B, Sugarbaker DJ, de Perrot M, Adjei AA, Adusumilli PS, Hirsch FR, Malik SM, Harpole DJ Jr. A Proposed System Toward Standardizing Surgical-Based Treatments for Malignant Pleural Mesothelioma, From the Joint National Cancer Institute-International Association for the Study of Lung Cancer-Mesothelioma Applied Research Foundation Taskforce. *J Thorac Oncol*. 2019 Aug;14(8):1343-1353. doi: 10.1016/j.jtho.2019.04.029. Epub 2019 May 25

Verma V, Wegner RE, Adeberg S, Horne ZD, Grover S, **Friedberg JS**, Simone CB 2nd. Management of Clinically Lymph Node-Positive Malignant Pleural Mesothelioma. *Semin Thorac Cardiovasc Surg*. 2019 Jun 19. pii: S1043-0679(19)30177-7. doi: 10.1053/j.semtcvs.2019.06.004

Transplant Surgery

The Division had the most active year ever for living donor liver transplant program (LaMattina) with top 3 outcomes in the United States.

- First drone-transported human kidney used organ for transplant (Scalea).
- Newly created position for Medical Director for Transplant Quality, Outcomes and Regulatory Compliance (Gray).
- Expanded transplant surgery fellowship to 3 positions with first female transplant surgery fellow (Wen Xie)

Urology

A few highlights of FY2019 for the Division of Urology include the following:

Rena Malik

- **Student teaching:** Is currently mentoring 10 UM medical students on various urology related research projects
- **Grants:** Assoc. of Women Surgeons Fellowship Grant- “Provider Use of recommended Communication Techniques and Analysis of Patient Education Materials for Pelvic Organ Prolapse Counseling” \$29, 586
- **Publications:** published 4 papers in peer reviewed journals as fist or senior author
- **Electronic Media:** Featured on radio Sirius xm: “Mens bladder health and urinary incontinence” January 30, 2019
 - Featured on UMMC facebook live “Ask our Expert’ pelvic floor disorders April 8, 2019
 - Chair, Twitter/Podcast Subcommittee; Society of Urodynamics, pelvic medicine and urogenital reconstruction
 - Member, Twitter/Podcast committee; Association of Women Surgeons

Minhaj Siddiqui

- Performed the first robotic perineal prostate biopsy in the country using the Biobot platform (a chinese technology company)
- A grant with MIPS for metabolic characterization of bladder cancer was funded
- Appointed national co-lead on a American College of Surgeons committee for establishing operative standards for bladder cancer surgery
- Awarded a Baltimore Top 40 under 40 award
- Named a Baltimore Magazine Top doc for prostate cancer surgery
- Awarded a co-investigator VA merit award grant for bladder cancer risk stratification
- Inducted as a faculty member int the AOA honor society for faculty mentorship of med students
- Published 9 papers

Vascular Surgery

Opening and expansion of Office-Based Laboratory for vascular procedures

- Volume of cases moved to OBL from UMMC = 562 cases to date
- The goals of the OBL is to decrease health care cost, Improve patient satisfaction, Increase access to care and Improve quality.
- Successfully completed these procedures with less than 20% of the patients receiving narcotic sedation.
- Scheduling of patients within 2 weeks of request with 60% patients offered service with 3-5 days.
- Providing Chemotherapy ports for patients with newly diagnosed cancer within 3-5 days.

- Office based Lab service reduce cost to payers approximately \$33,000 per case when otherwise done In a hospital regulated setting.

Tomorrow Program (started November 1, 2018) is providing any patient with next care consultation for wound care, ports, and de- clot of fistula for kidney dialysis.

New clinical research with randomized trial with oxygen-producing wound dressing (Ogenix Epiflo) to improve healing of lower extremity surgical incisions. (Principal Investigator: Dr. Nagarsheth)

University of Maryland selected as site for TAMBI multi-branched endovascular stent graft clinical trial by W.L. Gore.

New faculty joined the Division (Drs. Desikan, Gitlitz and Li)

The Department of Surgery enters FY 2020 with a strong, efficient and expanding faculty, demonstrated excellence in the educational, research and clinical arenas, and with solid partnerships with our School, our Campus and a rapidly expanding Medical System. We will have a new Department Chair, Dr. Christine L. Lau joining us in December 2019. Together with the faculty leadership and the administrative leadership, Dr. Lau to develop the Strategic Plan for FY2020 and the future.

Addendum 1 - Below are some media articles from FY2019 highlighting our faculty:

US News and World Reports, June, 17, 2019 – What Premeds Should Know About Types of Doctors...

Dr. Rena D. Malik, a urologist who is the director of female pelvic medicine and reconstructive surgery at the [University of Maryland School of Medicine](#), says aspiring doctors should enter medical school "with an open mind" and a willingness to explore a variety of medical specialties.

"I never thought I would be a surgeon and definitely not a urologist, but I found the field so compelling that I decided to pursue it," Malik wrote in an email. "It always helps to learn about the variety of specialties available to you in medical school but you have to like the basics – taking care of people."

New York Post, June 12, 2019 – Gen-edited pig organs being tested on monkeys in hopes of human use..

eGenesis co-founder and chief scientist Luhan Yang says their lab has the means to carry out 62 genetic alterations at once on pig genes, but critics say that's more than necessary, and could potentially be harmful to the animal. Furthermore, current testing has yielded pigs created expressly for a single organ, rather than one pig providing multiple organs, which Dr. Muhammad Mohiuddin, director of the program in cardiac xenotransplantation for the University of Maryland School of Medicine, calls a "waste" of organs.

MPT, Direct Connection, January 14, 2019 – Video with Dr. Mohummad Minha Siddiqui

Dr. Joseph Scalea's Drone used to transplant organs for organ transplantation surgery appeared in the following media:

- Newsweek, August 20, 2019 – Organs by Drone? Unmanned flying vehicles could soon carry body parts for human transplants, by Alfred Joyner
- Baltimore Sun, January 9, 2019 – The next use for drone delivery? Organs, one Baltimore surgeon proposes, by Meredith Cohn
- CNN Health, December 21, 2018 – Your medical supplies could soon arrive by drone, by Jack Guy
- Associated Press, November 21, 2018 – Are drones the next big thing in organ donation? Video
- AOPA – Aircraft Owners & Pilots Association, November 26, 2018 – A Precious Payload, Team proves drones viable for organ transplant.
- Digital Trends, November 21, 2018 – Drones can safely fly a human kidney without damaging it, study shows, by Luke Dormehl
- C\Net, November 20, 2018 – Drones can successfully deliver human organs, study shows...It's a bird! It's a plane! It's a kidney?, by Gordon Gottsegen
- Becker's Clinical Leadership & Infection Control, November 20, 2018 – Maryland hospital confirms drones can deliver donated organs, by Harrison Cook