

Mentor		Department	Title	Aims/Hypothesis
Peter	szmuk	Anesthesiology & Pain Management	Evaluation of Respiratory Acoustic monitor in Children after surgery	The accuracy and reliability of RAM has not been evaluated in the in-patient surgical wards of the pediatric population. We were interested in comparing the reliability and accuracy of RAM and TI monitoring in postoperative pediatric patients at risk of adverse respiratory events while also assessing the tolerance of the RAM sensor and ECG pads (transthoracic impedance).
Peter	Szmuk	Anesthesiology & Pain Management	Association of Serum Vitamin D Concentration with Infection Outcomes for Children after Surgery	We predict that vitamin D deficient pediatric patients will have a higher incidence of composite infectious complications. We will also analyze whether there is a relationship between the patient's vitamin D levels and hospital length of stay.
Eric	Rosero	Anesthesiology and Pain Management	Patient Satisfaction with Epidural Analgesia: Development of a Pilot Questionnaire	To investigate domains associated with patient satisfaction with EA after major abdominal surgery and to develop a multidimensional psychometric pilot questionnaire to assess patient satisfaction for EA.
Steven	Wolf	Burn, Trauma, Critical Care - Division of General Surgery	Mitochondrial Dynamics of Burns	We hypothesize that severe burn impaired muscle atrophy is associated with increased mitochondria fission with function impairment, secondly disturbance cellular homeostasis resulting in muscle mass loss. Severe burn increase inflammatory cytokine, we therefore to investigate the mitochondria dynamics changes in an in vitro model.
Subhash	Banerjee	Cardiology	Calcification Scoring for Infrainguinal Peripheral Arteries	We aim to determine the inter-reader and intra-reader reproducibility of both a previously published rubric for grading degrees of calcification in peripheral arteries, and an alternative rubric proposed by the core lab at the North Texas VA Medical Center.
Subhash	Banerjee	Cardiology	Prescription Trends Following Peripheral	Our results showed that prescription of

			Arterial Interventions	guideline medical therapy decreased over time, and that there are in fact differences in the preferred prescription treatment of patients by the vascular surgery and cardiology services at the VA.
Jarett	Berry	Cardiology	Determinants of Variation in Left Ventricular Global Longitudinal Myocardial Strain: The Dallas Heart Study	We believed that in individuals with increased visceral adiposity or increased left ventricular concentricity, strain values would be more positive compared to individuals with less visceral adiposity and decreased concentricity. On the other hand, we believed that individuals with increased subcutaneous adiposity would have more negative strain values compared to individuals with less subcutaneous adiposity.
Emmanoulis	Brilakis	Cardiology	Impact of Crossing Strategy on Intermediate-Term Outcomes After Chronic Total Occlusion Percutaneous Coronary Interventions	We sought to examine the impact of crossing strategy on intermediate-term outcomes after chronic total occlusion (CTO) percutaneous coronary intervention (PCI).
Emmanouil	Brilakis	Cardiology	Impact of Crossing Technique on the Incidence of Periprocedural Myocardial Infarction During Chronic Total Occlusion Percutaneous Coronary Intervention	We hypothesized that the retrograde technique for crossing coronary CTOs will have higher rates of PMI than both antegrade wire escalation and antegrade dissection/re-entry.
Joseph	Hill	Cardiology	Summer project - Fibrosis and HFpEF	Hypertrophied cardiomyocytes will release soluble factors that are sufficient to provoke cardiac fibroblast proliferation and activation.
Nikhil	Munshi	Cardiology	Elucidation of committed cardiomyogenesis reprogramming with Hand2 regulation	Elucidation of committed cardiac reprogramming, regulated by Hand2 expression.
Nikhil	Munshi	Cardiology	Evaluating Retrovirus Infection Reprogramming of Fibroblasts into Cardiomyocytes	One way to counteract the effects of a heart attack is to convert the fibroblasts of the scar tissue to healthy cardiomyocytes via reprogramming. While this has been done before, success rates are very low. The goal is to improve this so that reprogramming becomes a viable therapy for patients.
Kemp	Kernstine	Cardiovascular and Thoracic	Robotic vs. VATS Lung Resection Surgery	We hypothesize that robotic technology

		Surgery		provides a superior approach for lung resection procedures - it reduces the length of stay, post-operative complications, and improves patient functionality.
Hao	Zhu	Children's Medical Center Research Institute	Loss of hepatocyte Arid1a leads to increased liver regeneration	Previous work in my lab has shown that loss of Arid1a leads to increased hepatocyte proliferation and cellular survival after injury, which improves regenerative capacity and confers resistance to diverse forms of tissue damage. These findings suggest that alterations to the SWI/SNF chromatin-remodeling complex may represent adaptive events during tissue injury. For my project, I sought to uncover the effect of the loss of Arid1a on the transcriptome and epigenome of hepatocytes using bioinformatics tools.
Harry	Kim	Department of Orthopaedic Surgery	Effects of Necrotic Bone Fluid on Mesenchymal Stem Cell Differentiation following Ischemic Osteonecrosis of the Femoral Head	We propose that soluble factors in the necrotic bone environment are necessary and sufficient to direct MSCs to become fibroblasts instead of osteoblasts.
Benjamin	Chong	Dermatology	Peripheral blood gene expression in discoid lupus erythematosus patients with and without systemic lupus erythematosus	Aim One: To determine differences in PBMC transcriptomes, with particular attention to type I IFN-related genes and cytokine genes, between DLE+SLE+ and DLE+SLE- patients. We hypothesize that multiple type I IFN-related genes and cytokine genes will be up-regulated to a greater extent in DLE+SLE+ PBMCs compared with DLE+SLE- PBMCs due to the widespread disease seen in SLE patients. Aim Two: To determine differences in whole blood transcriptomes, with particular attention to type I interferon-related genes and cytokine genes, between DLE+SLE+ and DLE+SLE- patients who were not taking oral medications at the time of blood sample collection. We hypothesize that the difference in expression levels between DLE+SLE+ and DLE+SLE- patients will be more visible when the patients are not taking oral medications that interfere

				with gene expression.
Donald	Glass	Dermatology	The role of phosphodiesterases in keloid formation and pentoxifylline action	We predict that the expression levels of some phosphodiesterases are increased in keloid tissue compared to normal skin tissue.
Donald	Glass	Dermatology	Analysis of association between keloids and other medical conditions	This study's aim was to objectively assess whether there is an association between hypertension and/or obesity with keloid-affected patients and to evaluate whether subcategories of keloid-affected patients had greater associations with hypertension and/or obesity.
Donald	Glass	Dermatology	Elevated Blood Plasma ACE levels in Patients with Keloid Scarring	Our hypothesis is that blood plasma ACE levels will be elevated in keloid patients compared to non-keloid patients.
Heidi	Jacobe	Dermatology	Colocalization of Cell-Specific Markers with CXCR3 Ligands via Double-Labeling Immunofluorescence Microscopy in Lesional Morphea Skin	Inflammatory morphea lesions are enriched with CXCR3+ T cells accompanied by the expression of CXCL9 and CXCL10 by macrophages.
Lu	Le	Dermatology	Mechanisms Regulating Schwannoma Development	As a small part of this research project, specific aim A is to elucidate whether overexpression of YAP1 (transcriptional co-activator of the Hippo pathway) dominant negative mutation will inactivate the Wnt/ β -catenin pathway as well as inhibit the proliferation of schwannoma cells in vitro and in vivo. Specific aim B is to determine whether LATS1/2-YAP1 pathway is the main engine for Schwannomagenesis.
Amit	Pandya	Dermatology	Quality of Life in Asian and non-Asian Patients with Vitiligo	This is the first cross-sectional study done in which the sample population includes patients from different countries of origin. It has been known that South Asian cultures tend to associate Vitiligo with other diseases such as leprosy, and women with Vitiligo have difficulty finding a spouse. Therefore, we predict that in our sample population, patients of Asian descent will have worse quality of life than patients of non-Asian

				descent as determined by the Vitiligo-specific quality of life instrument- VitiQOL.
Amit	Pandya	Dermatology	Socioeconomic burden of in-office phototherapy versus home phototherapy in patients with Vitiligo	Home Phototherapy will reduce the socioeconomic burden and long-term out-of-pocket costs for Vitiligo patients because of the decreased necessity for in-office treatments. The objective of this study is to evaluate and compare the treatment time and treatment costs of in-office phototherapy to that of home phototherapy in the treatment of Vitiligo.
Amit	Pandya	Dermatology	Health Related Quality of Life Study of Vitiligo Patients in the United States	The purpose of this research is to study the quality of life of vitiligo patients in the U.S with SF-36 general health questionnaires.
Raymond	Fowler	Emergency Medicine	Faculty Utilization of an Emergency Department Observation Unit: Variations in Clinical Practice Standards at a Large Public Teaching Hospital	The hypothesis of the study is that, given the strict protocols for admission to the OU, the admission patterns by EPs to the OU of Parkland Memorial Hospital Emergency Department (ED) should be very similar. The objective of this study was to examine the admission patterns by EPs of patients to the OU from the ED to examine any variability among these faculty members.
Lynn	Roppolo	Emergency Medicine	Improving Emergency Department Discharge Through Physician Directed Instructions and A Simple Algorithm Designed for Residents in Training: the R2D2 Disposition Protocol	To assess the effectiveness of a new discharge protocol, used by physicians in training, on patient understanding of discharge instructions, patient satisfaction and emergency department discharge dwell times.
Lynn	Roppolo	Emergency Medicine	Improving Emergency Department Discharge Through Physician Directed Instructions and a Simple Algorithm Designed for Residents in Training: the R2D2 Disposition Protocol	The objective of the study was to assess the effectiveness of a standardized discharge protocol, executed by a physician in training, in order to improve patient understanding of their discharge instructions, adherence to follow-up instructions, patient satisfaction; and decrease unplanned emergency department re-visits and hospitalizations.
Lynn	Roppolo	Emergency Medicine	Improving Emergency Department Discharge Through Physician Directed	The objective of the study was to assess the effectiveness of a standardized discharge

			Instructions and a Simple Algorithm Designed for Residents in Training: the R2D2 Disposition Protocol	protocol, executed by a physician in training, in order to improve patient understanding of his or her diagnosis and medications, adherence to follow-up instructions, patient satisfaction; and decrease additional emergency department visits and hospitalizations.
Amer	Shakil	Family Medicine	Development and Validation of HITS Screening in Pediatric Populations	Does this short screening tool for pediatric violence capture incidences of family violence in primary care settings?
Rama	Ranganathan	Green Center for Systems Biology	The Mechanism of Redox Switching in the InaD Scaffolding Protein	Selected mutations to residues on the PDZ5 which co-evolved with or are spatially proximal to the cysteine residues within the protein confers the redox-tuning property of the protein.
Kimberly	Reynolds	Green Center for Systems Biology	Optimizing Allosteric Communication	We hypothesize that sector architecture provides a short evolutionary for the gain of allosteric regulation. Thus, the allosteric regulation displayed by sector-connected DHFR/LOV2 mutants should be easily optimized through short paths of point mutations while non-sector connected mutants should remain resistant to allosteric communication despite further mutation. Here, we report on the development of an assay to test this hypothesis.
John	Minna	Hamon Center for Therapeutic Oncology	Assessing Downstream Targets of ASCL1	The purpose of this project was to downregulate these targets to evaluate the effect on tumor cell viability with the expectation that in ASCL1-positive (ASCL1-expressing) tumor cell lines, downregulation of ASCL1 targets would result in reduced relative viability in comparison to ASCL1-negative tumor cell lines.
Pranavi	Sreeramoju	Infection Prevention	Chief of Infection Prevention at Parkland	The aim of this project is to develop a process for review and to establish feedback loops in order to further reduce the SSI rate to as close to 0% as possible.
Ezra	Burstein	Internal Medicine	Mutant secretagoin, a potential cause of	This disease associated variant results in an

			ulcerative colitis, exhibits reduced affinity for SNARE complex protein SNAP-25	amino acid substitution (R77H) in the Ca ²⁺ -binding region of secretagogin, which has been shown to interact with SNARE proteins in a Ca ²⁺ -dependent manner to mediate membrane fusion and exocytosis. Therefore, we examined whether this SCGN mutation impairs its Ca ²⁺ -dependent binding to the SNARE complex component SNAP-25 in vitro.
David	Greenberg	Internal Medicine	Development of Novel Gene-Silencing Therapeutics for Pseudomonas Biofilms in Cystic Fibrosis	PPMOs targeting quorum sensing genes in <i>P. aeruginosa</i> will be able to both prevent the formation of biofilms as well as breakdown existing biofilms.
Pranavi	Sreeramoju	Internal Medicine	Epidemiological Study of Methicillin-Resistant Staphylococcus aureus Among Patients on a Burn ICU	The objective of this study is to describe the epidemiology of MRSA among patients in a burn unit including the impact of removal of ASC on hospital-onset (HO) blood stream infections (BSI) in order to inform MRSA control efforts in this population.
Qi	Fu	Internal Medicine, Cardiology Division	Endothelial function in women at high risk for hypertensive pregnancy	We hypothesized that women at high risk for a hypertensive pregnancy would show less arterial flexibility early in pregnancy than women of average risk. To determine if this was the case, we measured the degree of flow-mediated vasodilation (FMD) in the brachial artery.
Nikhil	Munshi	Internal Medicine, Eugene McDermott Center for Human Growth & Development, Molecular Biology	To determine the influence of substrate stiffness and surface coating on direct cardiac reprogramming efficiency.	To determine the influence of substrate stiffness and surface coating on direct cardiac reprogramming efficiency.
Emmanouil	Brilakis	Interventional Cardiology	Prospective Trial to Compare FFR Measurement with a Non-Side-Hole Guide Catheter Vs. a Side-Hole Guide Catheter	The purpose of this prospective study was to determine whether fractional flow reserve (FFR) measurements obtained with an engaged side-hole guide catheter were more accurate as compared with those obtained with an engaged non-side-hole guide catheter.
First Name	Last Name	Mentor Department	Title	Hypothesis/Specific Aim

Mehari	Gebreyohanns	Neurology	Can patient anxiety be alleviated with music therapy? (The CALM Study)	To determine if rehab patients with altered levels of cognitive processing have less anxiety and/or depression after a 1-hour music therapy intervention compared to those who do not receive music therapy.
Venkatesh	Aiyagari	Neurology & Neurotherapeutics	Improving Hand Hygiene Compliance in Hospital Care	The aims of this study were to build and test a system to monitor and remind HCW and visitors to perform HH before and after patient contact and to study the effect of such a system on improving HH compliance.
DaiWai	Olson	Neurology & Neurotherapeutics	Exploring associations between non-invasive and blood pressure monitoring for patients receiving vasoactive medication infusions.	To document the NIBP:ABP relationship in the setting vasoactive medication administration.
Joachim	Herz	Neurology and Neurotherapeutics	Impact of Reelin Deficiency on GABA-ergic Interneuron Population in the Barrel Cortex	We wanted to see if long-term Reelin deficiency had an effect on the number of GABA-ergic interneurons in Reelin conditional knockout (cKO) mouse brains compared to Reelin-producing mouse brains.
Joachim	Herz	Neurology and Neurotherapeutics	Reelin Does not Impact Recovery from a Stroke	Since Reelin has neuroprotective effects, we were interested to see if Reelin plays a role in recovery after significant neurological damage. Earlier studies with reeler mice showed that mice lacking Reelin have increased susceptibility to stroke and suffer more damage post-stroke. Since Reelin is important in neuronal migration during development, it is possible that the effects seen were due to improper brain development, instead of Reelin deficiency itself. We wanted to see if Reelin has any effect on stroke and if the results seen using reeler mice can be seen in Reelin conditional knockout (cKO) mice, which show the effects of Reelin loss while permitting normal brain development.
Jane	Johnson	Neuroscience	Ascl1 in Astrocytogenesis and GM/WM Spatial Restriction of Astrocytes	I seek to determine whether Ascl1+ progenitor cells give rise to astrocytes in the

				embryonic brain, and to determine whether astrocyte clones in general display the GM/WM spatial restriction observed in Ascl1-lineage astrocyte clones in the spinal cord.
Helen	Lai	Neuroscience	Determine the roles of an Atoh1-lineage subset of motor neurons in muscle innervation	The purpose of my research was to further characterize Atoh1-lineage motor neurons by identifying potential projection sites and determining whether these motor neurons are alpha, beta, or gamma.
Todd	Roberts	Neuroscience	Electrical Synapses in Songbird Premotor Nucleus	This project was designed to visualize the types of neurons in HVC coupled by electrical synapses (basal ganglia-projecting, motor-projecting, and/or interneurons) using immunohistochemistry.
Mackenzie	Frost	NICU	Improving Parent-Staff Communication in the Parkland Neonatal Intensive Care Unit	Phase 1 - Obtain baseline measurements regarding parent-staff communication. AIM: To improve reported parent-staff communication by 10% in the Parkland Neonatal Intensive Care Unit between June 2015 and December 2017.
Robyn	Horsager-Boehrer	OB/GYN	Impact of a Physician Dashboard on Episiotomy Utilization at Clements University Hospital	My project aimed to create a dashboard for the CUH Labor and Delivery staff that reported physicians' performances of selected obstetric interventions that would establish a baseline performance level for the institution and individual providers and would ultimately reduce the episiotomy utilization by individual providers outside of the national benchmark by 10% in 6 months.
Kimberly	Kho	Obstetrics and Gynecology	Risk of Occult Uterine Sarcoma in Women Undergoing Hysterectomy for Benign Indications - An Analysis of Over 10,000 Hysterectomies	We sought to determine the frequency of unsuspected sarcoma identified postoperatively in women undergoing surgery for benign gynecologic indications at our institution.
Carole	Mendelson	Obstetrics and Gynecology, Biochemistry	Roles of miR-1246, miR-146, and miR-155 and their Targets in Human Trophoblast Differentiation	To analyze expression of miR-155, miR-1246, miR-146 and their targets during differentiation of human trophoblasts in culture and the effects of hypoxia.

John	Hulleman	Ophthalmology	Generation of high-throughput-capable fusion proteins for identifying new drugs to treat glaucoma	The focus of this study was to develop, characterize and use the GLuc assay as a rapid, sensitive, and inexpensive method to quantify MYOC folding and secretion, ultimately identifying new chemical or genetic modulators of MYOC secretion. PCR amplification, restriction enzyme digestion, ligation, E. coli. transformation, plasmid mini preps, and Q5 mutagenesis were completed to generate new pcDNA3 WT and mutant-MYOC eGLuc2 fusion constructs.
Karanjit	Kooner	Ophthalmology	Environs of Glaucoma	The aim of this study is two-fold. First, to examine the prevalence of various risk factors other than IOP amongst glaucoma patients versus a control group. Second, to investigate factors that influence patient compliance, knowledge about glaucoma, effects on lifestyle, and satisfaction with their glaucoma treatments.
Matthew	Petroll	Ophthalmology	MED 1054: The Effect of Rho Kinase Inhibitor on Post-Surgical Corneal Haze	We sought to determine if the application of rho kinase inhibitor decreases keratocyte activation and subsequent corneal haze.
Danielle	Robertson	Ophthalmology	Pseudomonas aeruginosa Transcriptome During Human Neutrophil Mediated Biofilm Development	Evaluate changes in the transcriptome of clinical isolates of PA following exposure to neutrophil-derived extracellular scaffolds.
Dr. Michael	Huo	Orthopaedic Surgery	Retrospective Cross-sectional Imaging Evaluation in a Total Joint Replacement Population	The aim of this study is to investigate correlations between radiologic parameters found on MRI and CT studies and post-surgical outcomes in Total Knee Arthroplasty (TKA) and Total Hip Arthroplasty (THA) patients. We hypothesize that significant correlations exist between radiologic parameters such as muscle volume and abdominal fat fraction and post-surgical outcomes.
Michael	Huo	Orthopaedic Surgery	Outcome of Revision of Total Hip Replacements	The purpose of this study is to analyze the cause of failure of hip replacements, and to explore the outcome of patients who undergo revision surgery.

Michael	Huo	Orthopaedic Surgery	Outcomes of Total Hip Arthroplasties	The purpose of this study is to analyze the cause of failure of hip replacements, and to explore the outcome of patients who undergo revision surgery.
Michael	Khazzam	Orthopaedic Surgery	Retrospective Evaluation of Patient Outcomes with Ketorolac Shoulder Injections	The objective of this study is to retrospectively examine the outcomes in patients who received a glenohumeral or subacromial injection of Ketorolac.
Michael	Khazzam	Orthopaedic Surgery	Anterior Cruciate Ligament Tear: Timing of Surgery and Incidence of Associated Intra-Articular Injuries	With prolonged delay between an ACL tear and definitive surgical reconstruction, there is increased damage to the other internal structures of the knee.
Michael	Khazzam	Orthopaedic Surgery	Retrospective Evaluation of Patient Outcomes with Ketorolac Shoulder Injections	When compared to corticosteroid injections, intra-articular Ketorolac (NSAID) injections provide a safer and equally efficacious nonoperative treatment option for a variety of painful shoulder pathologies. The objective of this study is to retrospectively examine the outcomes in patients who received a glenohumeral or subacromial injection of Ketorolac.
George	Liu	Orthopaedic Surgery	Incidence of Superficial Deltoid Ligament Invagination in Ankle Fractures	The objective of this study is to retrospectively examine the occurrence of superficial deltoid ligament invagination of the medial clear space in isolated fibular malleolar ankle fractures. If superficial deltoid ligament invagination is proved to be rare and have specific indications, surgeons can reduce the number of medial ankle arthrotomies being performed, therefore decreasing cost and risk for saphenous nerve and vein injury.
Medardo	Maroto	Orthopaedic Surgery	Outcomes of Patella Fractures Treated by Tension Band vs Cannulated Screws	The purpose of the project was to compare the complications and functional outcomes of tension band technique vs. cannulated screws. We hypothesized that cannulated screws would provide fewer complications as they are shorter and interfere less with surrounding tissue, thus leading to less

				symptomatic hardware.
George	Liu	Orthopaedics	Redefining the Radiographic Parameters of the Human Ankle Syndesmosis	The purpose of our study was to document a significantly larger set of radiographic parameters in more patients and across more imaging modalities than has ever been used to evaluate the healthy, human ankle to date.
Kenneth	Lee	Otolaryngology	Development of Novel Electrode Array with Shape Memory Polymer to Improve Cochlear Implant Insertion	Insertion of the novel electrode array incorporating shape memory polymers will demonstrate significantly less cochlear trauma than insertion of a standard cochlear implant, as measured histologically.
Ted	Mau	Otolaryngology	User Interface for Vocal Fold Simulation	To create a user-friendly graphical interface for the NCVS voice simulator, and to use it to determine gender differences in vocal fold tissue properties.
Ted	Mau	Otolaryngology	User Interface for Vocal Fold Modeling	To create a user-friendly graphical interface for the NCVS voice simulator, and to use it to determine gender differences in vocal fold tissue properties.
Ron	Mitchell	Otolaryngology, Pediatrics	Polysomnographic Variation Due to Demographics in the Pediatric Population	I hypothesized that male gender, African American race, older age, tonsillar hypertrophy, obesity, pre-term birth status, and the presence of allergic rhinitis, asthma, and gastroesophageal disease (GERD) are risk factors for OSA (as measured by AHI) in the adolescent population.
Darryl	Miles	Pediatric Critical Care	Apolipoprotein E Isoform Influence on Outcomes After Pediatric Traumatic Brain Injury	The objective of this study is to investigate the relationship between APOE genotype and functional outcome following pediatric TBI. We hypothesized that the $\epsilon 4$ allele is associated with functional recovery and outcome following TBI. Furthermore, we tested the hypothesis that $\epsilon 4$ is correlated with rate of recovery and an increased risk of developing post-traumatic seizures.
Joseph	Murphy	Pediatric General Surgery	Comparison of the Clinical Presentation of Two Age Groups in Pediatric Wilms Tumor Patients at a Single Institution	This study aims to characterize the presentation of Wilms Tumor patients at Children's Medical Center over 5 years from

				2010 to 2015.
Edaire	Cheng	Pediatric GI	Eosinophilic Gastrointestinal Diseases	The purpose of this research is to elucidate the relationship and potential co-morbidities between EoE and the other EGIDs (EG, EGE, and EC).
Naomi	Winick	Pediatric Hematology-Oncology	Risk factors for toxicity during the induction and delayed intensification phases of treatment for acute lymphoblastic leukemia (ALL)	We sought to determine whether age, ethnicity, and/or BMI influences the likelihood of a patient with ALL experiencing a grade 3-5 chemotherapy-related toxicity during the induction and delayed intensification phases.
Steven	Skapek	Pediatric Hematology/Oncology	Characterizing p53's role in senescence using an IRBP-Cre/Cyclin D1 mouse	To determine when p53 is required for cells to undergo oncogene-induced senescence, and to determine if p53 is required to maintain the senescent state.
Diana	Diesen	Pediatric Surgery	Contemporary Review of Pediatric Thyroid Surgery	Our study is the largest contemporary review to characterize the presentation, treatment, and outcomes in all pediatric patients requiring thyroid resections from two medical centers. We examined the factors associated with complications, the accuracy of FNA, and management of follicular lesions.
Hannah	Piper	Pediatric Surgery CMC	Central Venous Access in Children with Intestinal Failure on Home Parenteral Nutrition	The purpose of this study is to review the incidence and type of catheter complications in this patient population to better guide catheter management.
Linda	Baker	Pediatric Urology	Examining retrograde ureterogram in complex management of ureterocele	The present study sought to determine clinical outcomes in ureterocele patients undergoing RU at the time of cystoscopy.
Dawn	Johnson	Pediatrics, ARMS clinic	Acceptability of Screening for Sexually Transmitted Infections in an Urban Pediatric Emergency Department in the Southern Region of the United States	To determine the acceptability of screening for GC, CT, Trichomonas vaginalis (TC) and Human Immunodeficiency Virus (HIV) using non-invasive methods in adolescents 13 to 24-years-old.
James	Amatruda	Pediatrics, Internal Medicine, Molecular Biology	In vivo tool kit in Wnt signaling and heart regeneration	It has long been established that Wnt signaling plays an important role in development, but its role in cancer biology continues to be explored. Frequently,

				<p>mutations in the transduction cascade lead to aberrant cell growth and regulation and, therefore, cancer. Furthermore, manipulation of Wnt signaling has been implicated in the field of regenerative medicine. For these reasons, characterization of Wnt signaling within the context of human disease is of importance to study. Our research, firstly, focused on the screening and establishment of zebrafish lines that could be used to monitor and manipulate Wnt signaling in vivo. Additionally, we hypothesized that inhibition of Wnt signaling using small-molecule inhibitors would promote regeneration of cardiac tissue after injury in our mouse model.</p>
Kathryn	Davis	Plastic Surgery	Elevated levels of erythrocyte sedimentation rate and C-reactive protein as markers of diabetic foot osteomyelitis	<p>The presence of osteomyelitis further complicates the treatment course of these patients, secondary to prolonged antibiotic therapy, surgical interventions and therapy related adverse events including kidney injury, gastrointestinal complications and bacterial resistance. Presently, a combination of a positive bone culture and pathology is considered the most accurate method to diagnose DFO. However, bone biopsies are not routinely done in clinical practice and less invasive alternatives like imaging tests and serological markers have been studied extensively. Based on few data, the erythrocyte sedimentation rate (ESR) appears to be the best biomarker to diagnose patients with osteomyelitis. Elevated levels of other inflammatory serum markers such as C-reactive protein (CRP) or procalcitonin seem to be less informative.¹⁰ While the latter markers revert to normal levels within a week of treatment, the ESR drops more slowly and</p>

				may thus be used to monitor reponse to therapy. In this study we aimed to evaluate the effectiveness of the biomarkers ESR and CRP to diagnose DFO and to monitor success of treatment.
Jeffrey	Kenkel	Plastic Surgery	The use of micronized fat and free triglyceride for the treatment of scar appearance	This study examines the physiologic response to nanofat injection through alternate fractionation of the nanofat material in the rat model.
Ronnie	Pezeshk	Plastic Surgery	Breast Free Flap Database	We hypothesize that having two expert cosurgeons versus a single expert surgeon performing the free flap surgeries for breast reconstruction decreases OR time and hospital length of stay.
Ronnie	Pezeshk	Plastic Surgery	Retrospective Analysis of Risk Factors Associated with Free Flap Failure and Breast Reconstruction: DIEP flaps, PAP flaps, SIEA flaps, Four flaps	The aim of this study is to elucidate mechanisms to reduce flap failures and decrease surgical co-morbidities in the event that a re-operation is required. Reducing the necessity of re-operation can avoid extra hospital stay, additional cost, and surgery-related co-morbidities for the patient. The hypothesis is that poor operative technique is the most common reason for re-operation of breast reconstruction. The reporting of an operative issue might have the highest chance of resulting in another surgery to correct the flap failure. We expect to see a positive correlation between presence of reported poor operative technique and the requirement of re-operation.
Sumeet	Teotia	Plastic Surgery	Associated risk factors that lead to non-conservative management of DIEP, SIEA, and PAP flaps used for breast reconstruction	The purpose of the data was to discover which risk factors were associated with flap failures and surgical complications. The complications we explored included flap congestion, flap ischemia, tissue necrosis, wound development, and the formation of seromas and hematomas. Some of the risk factors we considered were patient BMI, smoking status, hypertension, previous

				exposure of radiation to the breast, previous abdominal surgeries, previous complications with breast tissue expanders and implants, and the use of only one surgeon to perform the surgery.
James	Thornton	Plastic Surgery	Rational and Argument for Subunit Mohs Excision	The intent of this research was to explore the possibility of expanding the principles of subunit reconstruction to the concept of subunit Mohs excision with the assertion that better cosmetic results and recovery are obtained by complete removal of nasal subunits and subsequent reconstruction of the entire nasal subunit when the defect occupies over half of the subunit.
Graham	Emslie	Psychiatry	The Impact of Insomnia on Suicidality	We tested the hypothesis that youth with higher levels of sleep disturbance would have increased rates of re-attempt and re-hospitalization during the 6-month follow-up period. This study could lead to the development of new therapeutic approaches by treating insomnia symptoms to reduce suicidality.
Carrie	McAdams	Psychiatry	Oxytocin Receptor Expression in Anorexia Nervosa	Hypothesis #1: Methylated CpG sites in the oxytocin receptor gene (OXTR) are found in AN-C subjects, but not AN-WR or H-C subjects. Hypothesis #2: All subjects (AN-C, AN-WR, HC) would have no significant differences in reaction times and AN-C patients would tend to overall agree less than the AN-R or HC groups.
Carol	Tamminga	Psychiatry	Behavioral and Molecular Effects of Maternal Deprivation in Combination with a Reverse Translational Mouse Model of Schizophrenia	The model of schizophrenia that is the subject of this research deals with a possible mechanism for how delusions are created in the mind of a schizophrenic person. It is postulated that delusions occur due to underactivity in the dentate gyrus (less pattern separation), and a compensatory overactivity in CA3 (increased pattern completion) of the hippocampus. In order to

				decrease hippocampal function in the dentate gyrus, NMDA function was eradicated in that area, by silencing the genetic component of its obligate subunit, GluN1.
Michael	Folkert	Radiation Oncology	High Dose-Rate Surface Applicator β -Particle Brachytherapy for Conjunctival Neoplasms	We hypothesized that β -particle brachytherapy can be used as an effective adjuvant to excisional biopsy with cryotherapy in patients with conjunctival melanoma (CM) or ocular surface squamous neoplasia (OSSN).
Ken	Westover	Radiation Oncology	Evaluation of Covalent Kinetics of Inhibitors	This precise measurement of enzymatic activity can yield kinetic constants and describe systems with inhibitors well. Thus, in my work I optimized the kinact and KI measurement assay. Furthermore, the limits of detection for this assay were calculated and are being analyzed, but will not be discussed further.
Kenneth	Westover	Radiation Oncology	SABR for NSCLC Tumors Larger than 5 cm.	Our study aims to retrospectively study the safety, efficacy, and outcomes of SABR on NSCLC tumors larger than 5 cm.
Daniel	Costa	Radiology	Comparison of signal-to-noise ratio at 3T MRI of the prostate: the influence of endorectal coil, body habitus and digital coil technology	Multiparametric MR imaging is currently the most accurate imaging technique for prostate cancer detection and local staging and therefore has been proposed as a risk stratification tool. Current standard of care multiparametric MR imaging of the prostate requires using an endorectal coil (ERC) which improves image quality. However, this device is associated with increased patient discomfort, invasiveness and cost. While some practitioners have transitioned to imaging protocols without endorectal coil, there are insufficient data to support that one approach is superior or equivalent to the other. Thus, we proposed an objective step-wise determination in a 58 patient cohort of the signal-to-noise ratio (SNR)

				gains attributable to the endorectal coil. This will provide data to guide the optimization of non-endorectal coil MR imaging protocols in patients with suspected prostate cancer.
Sergio	Huerta	Surgery	Predictors of Inguinodynia Following Open Inguinal Herniorrhaphy	We hypothesize that there are factors that can predict inguinodynia. This data could be used to identify techniques that aim at its prevention.
Christian	Minshall	Surgery	Prophylactic Use of Positive Pressure in Patients with Facial Trauma	We hypothesize that trauma patients with facial and/or sinus fractures who receive IPPB will not have rates of meningitis significantly different than in a similar subgroup of patients that did not receive IPPB; additionally, we hypothesize that rates of pneumonia will be lower in the group receiving IPPB as compared to the group that did not.
Jennifer	Rabaglia	Surgery	Effect of 'SMaRT' Enhanced Recovery Pathway on process and outcomes in a large, urban academic healthcare system	The objective of this project is to design, implement and evaluate an ERP for elective colorectal surgeries performed at Parkland and University Hospital. We aim to decrease hospital Length Of Stay by 30% and reduce complication rates by 10%.
Juquan	Song	Surgery	Functional Effects of UBM + Cell Therapy in Mouse Model After-Trauma	We predict that in comparison to controls, mice treated with UBM + precursor cells will demonstrate the following: increased muscle function, decreased atrophy, and/or increased tissue integration.
Steven	Wolf	Surgery	Evaluating Pre-Hospital Intubation Practices for Patients with Burn Injury	We hypothesize that an overestimation of airway injuries leads to aggressive pre-hospital intubation practices, which in turn results in an increased risk of early and late complications.
Brian	Williams	Surgery, Division of Trauma/Burns/Critical Care	Disparities in Advance Directive Use by Indigent Patients in the Surgical/Trauma Intensive Care Unit	Study aim: to shed light on and validate the conjectured disparity in our patient population's access to healthcare. We hypothesized that the predominantly indigent patient population admitted with an AD to our STICU is significantly lower at

				5%, and that our STICU saw at least 10% of patients without an AD status documented upon admission.
Rohit	Sharma	Surgical Oncology	A Retrospective analysis on prospectively collected melanoma database.	In our study, we seek to confirm previous studies that have shown that Hispanic patients present less frequently with melanoma, but they present at later stages.
Erdal	Toprak	Systems Biology	Evaluating Drug Combination Strategies to Confine the Development of Antibiotic Resistance	Here we examine the effectiveness of combining the antibiotics trimethoprim (TMP) and tobramycin (TOB) to reduce the development of drug resistance in E. Coli.
Joshua	Gatson	Trauma, Burn Surgery	Analysis of change in concentration of specific Biomarkers in Rat Brain Cortex after mild TBI	After mild TBI the level of GFAP, IBA-1, MCHR1, MAZ, MMP14 in rat brain cortex will differ from the control rats.
Jeffrey	Cadeddu	Urology	A retrospective study to determine the frequency of detection of pulmonary metastasis by chest x-ray in patients with a history of pT1 renal cell carcinoma (RCC).	We hypothesize that annual post-operative chest x-rays are a very low yield screening tool for detection of pulmonary metastases in patients with a history of pT1N0 RCC.
Yair	Lotan	Urology	Evaluating the Molecular Changes Associated with Low Grade Bladder Cancer Progression	The goal of this study is to identify somatic mutations in tumors of patients who initially presented with low grade disease and subsequently developed high grade disease. The characterization of the mutational profile of these tumors will enable us to determine whether the low grade and high grade tumors have a common origin (i.e. the high-grade tumor likely progressed from the low grade disease) or arose independently. Further, we expect that this may identify specific somatic mutations that may be used to predict disease progression.
Yair; Jodi	Lotan; Antonelli	Urology	Comparison of the rate of kidney stone formation in those with suspected versus confirmed primary hyperparathyroidism	While PHPT is classically described as a triad of elevated PTH, hypercalciuria, and hypercalcemia, we hypothesize that some patients with PHPT could have a normal or mildly elevated PTH, serum calcium, and/or urine calcium. The aim of this study is to compare those patients with elevations in

				<p>some but not all of these areas to those with elevations in all three parameters (PTH, urine calcium, and serum calcium) specifically comparing stone formation rates and outcomes after definitive treatment. Kidney stone formers with elevations in some but not all of the following parameters: PTH, serum calcium, and urine calcium, will have similar rates of stone formation and similar outcomes after definitive treatment compared to those patients with a diagnosis of primary hyperparathyroidism exhibited by an elevation in all three parameters.</p>
Claus	Roehrborn	Urology	<p>Novel Transrectal Ultrasound (TRUS) Guided Biopsy Staining Protocol to Predict Extent of Prostate Cancer at Prostatectomy</p>	<p>Depending on the extent of cancer tissue, RALP techniques can either damage or spare the prostatic plexus. Nerve sparing techniques are preferable to avoid post-surgical complications such as erectile dysfunction and urinary incontinence. The presented research is a retrospective analysis of a novel staining biopsy protocol performed by an experienced clinician at UT Southwestern. The staining protocol enables the clinician to determine distance from cancer tissue to prostate capsule. Patient data including cancer distance from capsule, number of positive cores, extracapsular extension, and extent of margin involvement will be analyzed to determine factors associated with successful performance of nerve preservation techniques during RALP. The overall aim of the research is to determine the threshold of neoplastic tissue proximity to the capsule of the prostate for successful nerve-sparing techniques.</p>
Philippe	Zimmern	Urology	<p>Lessons learned from the Manufacturer and User Facility Device Experience (MAUDE) database on transvaginal mesh</p>	<p>Study Aim: To investigate the trends in yearly volume, type, brand, and reporter of medical device complications for</p>

			and sling reports	transvaginal mesh and sling to the FDA Manufacturer and User Facility Device Experience (MAUDE) database.
Phillipe	Zimmern	Urology	Long term outcomes of suburethral tape removal	Synthetic midurethral sling (MUS) placement is the most common treatment for stress urinary incontinence in women. However, it can cause a variety of perioperative complications that indicate surgical removal of the sling. In this study we present a series of women with MUS complications and their mid- and long-term outcomes following complete or near-complete suburethral tape removal (STR).
Philippe	Zimmern	Urology	HIGH MIDLINE LEVATOR MYORRHAPHY FOR VAGINAL VAULT PROLAPSE: LONG-TERM RESULTS	The objective of this retrospective study from a prospectively maintained, IRB-approved, database is to review HMLM long-term outcomes in women with symptomatic VP at a tertiary care center.
Muhammad	Haque	UT Health Science Center at Houston Neurology Department	Longitudinal Neuroimaging Markers of Secondary Degeneration in Patients with Ischemic Stroke	We hypothesized that cortical and subcortical regions of the ipsilesional hemisphere, at a remote site from the infarct, will experience atrophy that can be quantified by longitudinal neuroimaging. The primary objective of the research was to measure longitudinal changes in gray matter cortical thickness and subcortical volume using magnetic resonance imaging in patients with ischemic stroke.
Dr. Maria and Dr. Ron	Veling and Mitchell	UTSW Pediatric Otolaryngology	The Effects of Allergic Rhinitis Treatment on Sleep Disordered Breathing in Children: A Systematic Review	The goal of this systematic review is to determine the effectiveness of allergic rhinitis treatment in improving sleep disordered breathing in children. We hypothesize that as allergic rhinitis symptomatology resolves with allergic rhinitis treatment, sleep disordered breathing in children will improve.
Subhash	Banerjee	VA Cardiology	CABG outcomes in PAD patients	Our goal is to determine the risk of perioperative and long term mortality among patients with extra-coronary vascular

				disease (particularly PAD) versus those without extra-coronary vascular disease.
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