

Tiffany Moon	Anesthesiology & Pain Management	Predicting the Need for Post-Operative Opioids after Ambulatory Surgeries: Development of Opioids Prescribing Guidelines in a Large Academic Center	Hypothesis: Patients who have intraoperative opioid administration guided by the ANI will have at least a 40% reduction in incidence of severe pain (VAS ≥ 7) in the PACU compared to patients in the standard practice group. Specific Aim: To determine if intraoperative opioid administration guided by the ANI will decrease patient pain scores in the PACU compared to standard practice.
Tiffany Moon	Anesthesiology & Pain Management	Reversal of Neuromuscular Blockade in Patients with Severe Renal Impairment	Patients with severe renal impairment who are reversed with sugammadex after rocuronium will achieve a TOF ≥ 0.9 within a time frame that is one-third of the time it takes for reversal with neostigmine after cisatracurium. Secondary Hypothesis: Patients reversed with sugammadex (versus neostigmine) will have a higher quality of recovery in the postoperative period.
Prashant Mishra	Children's Research Institute	Assessing the viability of metabolomics on routine muscle and liver biopsies of mitochondrial disease patients.	Mitochondrial diseases constitute a common group of genetic diseases with an incidence of approximately 1 in 5000, and involvement of both the nuclear and mitochondrial genome. Patients generally present with a multi-system disorder with multiple clinical phenotypes (1). While mitochondrial respiratory chain defects can impact all tissues, organs with high energy demands are most affected (2). Specifically, involvement of the brain, muscle, heart, kidney and liver is often observed (3). In patients with myopathy and suspected mitochondrial disease, a muscle biopsy is typically performed for definitive diagnostic purposes. These muscle biopsies analyze complex II and IV activity through histochemical assays of COX and SDH, as well as for the sub-sarcolemmal accumulation of mitochondria, a common histologic feature of the disease(4).

			Similarly, patients with a suspected mitochondrial hepatopathy can undergo tissue evaluation by liver biopsy (3). Currently, there is no effective or specific treatment for the vast majority of patients with mitochondrial disease.
Benjamin Chong	Dermatology	Family History in Patients with Cutaneous Lupus Erythematosus	We hypothesize that a minority of patients with CLE will have a positive family history. 2. Aim 2 - Identify the risk factors associated with a positive family history of CLE in this cohort of patients with CLE. Hypothesis 2 - We postulate that presence of SLE and African American race will significantly contribute to an increased risk of CLE in family members.
Benjamin Chong	Dermatology	Myeloid derived suppressor cells in cutaneous and systemic lupus erythematosus	To further explore our hypothesis, the aim of this study is to compare gene expression differences between M-MDSCs isolated from the blood of SLE and CLE patients. A comprehensive evaluation of the transcriptome of the isolated cells will be already performed with RNA sequencing (RNA-seq) in order to identify differentially expressed genes. After identifying multiple differentially expressed genes, we will use reverse transcription polymerase chain reaction (RT-PCR) to confirm their RNA-seq findings and measure RNA expression levels in CLE and SLE M-MDSCs. Hypothesis: CLE M-MDSCs express genes that promote T cell suppression and SLE M-MDSCs express genes that promote T cell activation.
Nnenna Agim	Dermatology	Evaluating the State of Education Regarding Sun Protection in Dallas Schools	We predict that there will be an inverse correlation between implementation of sun protection education at schools in the Dallas, Texas area and skin cancer rates by zip code. Methods: Measurements that will be specifically analyzed are what types of education that school-aged children in Dallas, Texas receive regarding sun protection.

David Gerber	Hematology/Oncology	Identifying clinician characteristics associated with ordering and completion of low-dose computed tomography (LDCT) lung cancer screening.	Lung cancer screening with low-dose computed tomography (LDCT) is straightforward and efficient. The procedure itself entails an annual non-contrast chest CT. The scan itself is performed within a single breathhold. Since there is no IV contrast, there is no risk of allergic reaction or nephrotoxicity. The radiation dose is only one-fifth that of a standard, diagnostic chest CT. Using the available Lung-RADS scoring system, well under 5 percent of scans are expected to result in a recommendation for an invasive procedure.
Naim Maalouf	Internal Medicine	Changes in Bone Density in Post-Lung Transplant Cystic Fibrosis Patients	Cystic fibrosis (CF) is an autosomal recessive disease characterized by mutations in the CFTR gene, causing chronic respiratory infections and obstructive lung pathology. An associated feature of CF is abnormally low bone mineral density (BMD), and although osteoporosis is not uncommon in those with end-stage lung disease, CF presents increased risk of osteoporosis due to increased pro-inflammatory cytokines and malnutrition, thus increasing bone resorption.
David Greenberg	Internal Medicine - Infectious Disease	Eradicating Biofilms: A Review of Past and Current Methods	When antibiotics are used in conjunction with AMF, there will be a synergistic bactericidal effect against various strains of coagulase-negative Staphylococci. Methods Biofilm of S. epidermidis will be grown in MHII media on stainless steel rings. Experimental variables and controls will be set up: no AMF or antibiotic treatment, an "AMF-only" control, three "antibiotic-only" controls, and three "AMF+antibiotic" variables.
James Brugarolas	Internal Medicine, Hematology/Oncology	Characterization of a Unique Metastatic Chromophobe Renal Cell Carcinoma: A Case Series	The hypothesis is that activation of the mTOR pathway through a mutation of the TSC1 protein is driving the anaplastic phenotype of these aggressive tumor cells. Aim 1: To determine the

			mechanism of activation of the mTOR pathway and whether that is responsible for the aggressiveness of a distinct phenotype of chromophobe RCC Aim 2: To define the driving mutation that is responsible for the distinct anaplastic cells present in the sampled chromophobe RCC tumors
Kalil Abdullah	Neurological Surgery	Assessing Corticosteroid Administration Prior to Stereotactic Biopsy in Primary Central Nervous System Lymphoma: A Review of Literature	There currently exists no genetic basis for selective tumor cell fluorescence after administration of 5-ALA. There are a wide range of genes that could contribute to fluorescence in high grade glioma tissues. Some candidate genes are thought to be involved in heme biosynthesis and cytosolic protoporphyrin receptors, but these are not validated. The positive gene screening through CRISPR/Cas9 will allow for an unbiased approach in identifying candidate genes that are involved in selective glioblastoma tumor cell fluorescence and result in one or more genes that allow for further cellular and functional studies.
Tomas Garzon-Muvdi	Neurological Surgery	Characterizing the immune microenvironment and assessing anti-PD-1 antibody efficacy in a mouse model of glioblastoma	We will compare brain tumor sections from two subgroups of mice: the first characterized by TP53, PTEN, and BRAF mutations, and the second characterized by only PTEN and BRAF mutations. We hypothesize that these subgroups each have different ratios of T-cell subpopulations, specifically with regards to regulatory T-cells, which have been implicated in tumor progression. We hypothesize that the subtype with increased CD4+ FOXP3+ regulatory T-cells will have a better response to PD-1 inhibition therapy since studies have suggested that the immune checkpoint PD-1 maintains regulatory T-cells in glioblastoma.

Shilpa Citnis	Neurology	Patient Perceptions and Knowledge About Deep Brain Stimulation for Parkinson's Disease	This study is a significant contribution to the field of gastroenterology and to the greater public health, illustrating how dietary changes can serve as a therapeutic means for ameliorating colitis.
Peter Tsai	Neuroscience/Psychiatry	Cerebellar Activation of Feeding Related Neurons in the Hypothalamus	Feeding behavior is tightly regulated in the brain through neural circuits. Understanding how neural circuits control feeding could offer insights into how these processes go awry in disorders of overeating, such as obesity, as well as in disorders of undereating, such as anorexia nervosa. Much investigation has focused on the hypothalamus and understanding its role in controlling feeding and metabolism. However, there are still many brain regions with the ability to affect feeding that are poorly understood. One such region is the cerebellum. The cerebellum has long been considered limited in function to control of motor processes. However, in the last two decades, the cerebellum has gained significant attention for its role in regulating non-motor functions.
Bradley Lega	Neurosurgery	Properties of EEG Signals at Retrieval Predict Encoding Position during Free Recall Memory Tasks	The primacy effect is robustly observed during a free recall memory test. ¹ Previous work using intracranial electroencephalography (iEEG) recordings has shown differential oscillatory patterns in core episodic memory networks during the encoding of initial words compared to later words presented in a list. ² The authors interpreted these differences as representative of an "attentional resource" that is depleted as more events are committed to memory. We anticipate items encoded in primacy may also exhibit characteristic patterns during the time of recall. Our goal is to create a logistic regression model that differentiates words encoded in primacy

			versus non-primacy using iEEG recordings immediately prior to word recollection.
Bradley Lega	Neurosurgery	Examining the Role of Cross-Regional Phase-Amplitude Coupling in Memory Encoding	Phase amplitude coupling (PAC) between theta and gamma oscillations is an established pattern of brain activity that supports the encoding and retrieval of memories in rodents and humans. PAC is an appealing mechanism to organize temporal sequences in both working and episodic memory and has been proposed as a strategy for integrating activity across multiple cortical regions in the representation of memory items. Human experiments have established that PAC occurs both within the hippocampus and neocortex during memory encoding and retrieval, and in rodents an exciting phenomenon has been observed by which the phase of the hippocampal theta oscillation modulates gamma oscillations in the cortex.
Lisa Chao	OB/ GYN	Cesarean Section and Risk of Adenomyosis: A Retrospective Study	Among women with pathologic diagnosis of adenomyosis at hysterectomy, is history of cesarean section linked to increased risk of developing adenomyosis? The purpose of this study is to determine whether a history of prior cesarean sections increases the risk of developing adenomyosis uteri. The primary objective of this study is to determine whether a history of prior uterine procedure, particularly cesarean section, increases the risk of developing adenomyosis uteri in the future. The second objective of this study is to determine whether there is a correlation between the number of prior cesarean sections and increased risk of developing adenomyosis in the future. The third objective of this study is to determine how diagnostic imaging such as ultrasound and MRI correlate to pathologic diagnosis of adenomyosis. Studies have explored

			the relationship between uterine procedures and risk of developing adenomyosis with little consensus.
Catherine Spong	OBGYN - Maternal Fetal Medicine Division	Anemia In Pregnancy	We hypothesize that the cut off for anemia in a higher socioeconomic, pregnant population is higher to that in a lower socioeconomic population where the 5th centile prior to delivery is 30%.
John Hulleman	Ophthalmology	Meta-Analysis of Single Cell RNA to Characterize Stress Response Differences Among Retinal Cell Types	We hypothesize that proteasome insufficiency is a key driving factor in multiple forms of RP and that bolstering proteasome activity through an engineered Nrf1 construct will protect against photoreceptor degeneration. Specific aims 1. That we can develop a self-regulating version of Nrf1 which bypasses conventional Nrf1 regulatory pathways and restores proper proteasome activity. 2. That introduction of this self-regulating Nrf1 strategy will protect rod photoreceptor cells in a mouse model of retinitis pigmentosa.
Krista Kelly	Ophthalmology	Investigating saccadic eye movements in children with deprivation amblyopia due to dense unilateral cataracts	I hypothesize that children with deprivation amblyopia will have abnormal saccades (increased saccade latency, decreased peak velocity and accuracy) relative to age-matched controls. I also hypothesize that an earlier age of onset, late surgery, and affected eye visual acuity will be related to abnormal saccade parameters.
Karanjit Kooner	Ophthalmology	Predicting glaucoma diagnosis and blindness with machine learning	We hypothesize that machine learning classifiers will be able to synthesize various glaucoma perimeters to flag individuals most likely to develop glaucoma and those most likely to progress to blindness. Specific aims: 1. To collect demographic, ocular and OCTA information on patients with glaucoma. 2. Trained machine learning classifiers will be tested to detect the relationship between multiple parameters and a diagnosis.

Karanjit Kooner	Ophthalmology	Normative Database based on Optical Coherence Tomography Angiography (OCTA) in Glaucoma	A more representative normative database will provide clinicians the ability to diagnose glaucoma early and follow progression of the disease more accurately. Specific aims: 1. To collect demographic, ocular and OCTA information on patients with no evidence of glaucoma and divide the data based on age, gender and race. 2. Attempt to reclassify glaucomatous damage.
Karanjit Kooner	Ophthalmology	Glaucoma in Myopia	As myopic degeneration may mimic glaucomatous damage, it is very difficult to diagnose glaucoma in these patients and to determine the degree of glaucoma damage. Therefore, the aim of the study is 1. To determine the prevalence of myopia (mild, moderate, severe) in patients with glaucoma (mild, moderate, severe). 2. To reclassify glaucoma damage based on our normative OCTA findings in myopic individuals without glaucoma. We hypothesize that individuals with moderate or severe myopia are more prone to develop severe glaucoma than those with mild myopia.
Karanjit Kooner	Ophthalmology	Optic disc area in glaucoma	This raises the question: do individuals with increasing myopia have smaller optic nerves (indicating fewer nerve fibers) and thus more prone to developing glaucoma? Hypothesis: Individuals with increasing myopia have smaller scleral openings (through which optic nerve exits the eye), therefore, smaller optic nerves and or fewer optic nerve fibers.
Danielle Robertson	Ophthalmology	Tear Levels of IGFBP3 and Corneal Epithelial Thickness in Patients with Type II Diabetes Mellitus	The potential role for IGFBP-3 in mediating these changes is unknown. Moreover, the potential for tear levels of IGFBP-3 as a novel biomarker for this metabolic disease requires further investigation. We hypothesize that tear levels of IGFBP3 will correlate with decreased corneal epithelial thickness and decreased basal epithelial density in patients with type II diabetes mellitus.

			We further hypothesize that the decrease in corneal epithelial parameters will correlate with a decrease in corneal nerve fiber length and density.
Alexandra Callan	Orthopaedic Surgery	Physical Activity and Functional Ability of Childhood Cancer Survivors	Sarcoma patients will experience decreased physical activity levels and more functional limitations than fellow campers at Camp Esperanza with other forms of childhood cancers.
Jay Shah, MD	Orthopaedic Surgery	Effects of adductor canal versus femoral nerve block in anterior cruciate ligament reconstruction with bone-patellar tendon-bone autograft	Administration of ACB in BTB ACL reconstruction will lead to greater quadriceps and hamstring strength, less muscle atrophy, shorter time to activation, and larger knee range of motion in patients compared to those with FNB. Specific aims 1. Gather specific data points measuring overall leg strength which include but are not limited to dynamometer readings in physical therapy, leg circumference, time to straight leg raise, time to 70% strength, time to quadriceps activation, knee range of motion, and quadriceps to hamstring strength. Pain management factors will be examined as well, including post-operative opioid intake and patient-reported pain levels. 2. Compare results from ACB and FNB using analytical strategies to ascertain and quantify clinical outcomes from each nerve block method.
Shaleen Vira	Orthopedic Surgery & Neurological Surgery	Artificial Intelligence Based Classification of Thoracolumbar Spine Injuries	We hypothesize that an artificial intelligence based model can more accurately determine thoracolumbar spine injury classification, and can serve as an important tool to augment a clinician's ability to diagnose and treat these types of fractures correctly.
Joel Wells	Orthopaedic Surgery	Comparison of Femoroacetabular Impingement and Hip Dysplasia at Cellular, Radiographic, Physical, and Gait levels	Developmental dysplasia of the hip and femoroacetabular impingement are a major cause of pain and morbidity. There is also little knowledge of how hip pain caused by differing pathologies affects a patient's pain, gait, function, and well-being.

Joel Wells	Orthopaedic Surgery	Does location of pre-operative pain affect outcomes post-operative at one year in patients undergoing periacetabular osteotomy, hip arthroscopy, or total hip arthroplasty?	The location of pre-operative pain (classified as hip, thigh, or knee) is a predictor of one-year outcomes in PAO, hip arthroscopy, and hip arthroplasty patients.
Joel Wells	Orthopaedic Surgery	Femoral Head Translation in Hip Joint Kinematics - Hip Instability Study	We hypothesize that differences in gait may display differences in femoral translation which will allow us to further characterize FAI and dysplasia. This Data will be obtained from the motion capture camera and will be used to quantitatively measure the musculoskeletal kinematics of the different groups hip joint and to provide a three-dimensional graphical display.
Henry Ellis	Orthopedics	ACL recovery across the sports: Sports-specific differences in response to ACL reconstruction and return-to-play in pediatric athletes	ports specific criteria will demonstrate differences in soccer, basketball, and football that will include secondary ACL injury rates, return to play rates, and rehabilitation.
Andrew Day	Otolaryngology	Head and Neck Cancer Survivorship Care Guideline Adherence: An Analysis Using Bi-Institutional Claims-Based Data and Retrospective Chart Review	We hypothesize that head and neck survivors are assessed for less than half of the recently published 33 recommendations of the American Cancer Society and American Society of Clinical Oncology. We also hypothesize that more than half of all physical and psychosocial harms are rarely assessed or even reported. This research study may have far reaching implications in the delivery of care by primary care physicians, oncologists, otolaryngologists, dentists and other health care professionals to the 65,000 newly diagnosed head and neck cancer patients and 450,000 current survivors in the United States.

Andrew Day	Otolaryngology	Factors Impacting the Development of Significant Morbidity in Head and Neck Cancer Survivors: A Multi-Factorial Analysis of the National Health Interview Survey	We hypothesize that these factors, especially low SES and lack of primary care, are associated with worse morbidity in head and neck cancer survivors. It may be that patients in particular encounter barriers to postoperative care, such as a lack of primary care, that place them at increased risk for these complications. By identifying risk factors for significant morbidity in head and neck cancer survivors, we hope to inform clinical approach to these patients. We believe this study can help care teams managing at-risk head and neck cancer patients predict and preemptively mitigate the gaps in care these patients may face.
Ashleigh Halderman	Otolaryngology	Systematic Review comparing open and endoscopic surgical removal of clival and superior spinal chordomas	Clival chordomas are a rare tumor that arise from cells from the notocord. They have historically been removed via an open procedure. However, in the last 15 years, skull base surgeons have begun removing clival chordomas via an endoscopic approach. The endoscopic approach has a shorter healing duration, fewer complications, and increased likelihood of achieving gross total resection.
Christopher Liu	Otolaryngology	Factors in Post-Tonsillectomy Complications	We have noticed that the vast majority of otherwise healthy patients with severe OSA never have complications while they are in the hospital. The goal of this study is to evaluate risk factors for post-tonsillectomy complications so as to better determine which patients require inpatient observation after surgery. Specific Aims: 1) Evaluate whether the current AAO guidelines lead to unnecessary admission of healthy patients with severe OSA after tonsillectomy and adenoidectomy. 2) Identify risk factors for postoperative complications in these patients (ethnicity, sleep study findings, BMI, etc).

Ron Mitchell	Otolaryngology	Obstructive Sleep Apnea in Children with Down Syndrome	Children with Down Syndrome (DS) are more likely to have obstructive sleep apnea (OSA) compared to the general pediatric population. A recent study suggested a prevalence of 70%. Adenotonsillar hypertrophy is a typical cause of OSA in children; therefore, first-line treatment is tonsillectomy and adenoidectomy (T&A). Polysomnography (PSG) is the gold standard for diagnosis. Among children without DS, T&A normalizes PSG parameters in 80% of the population. In contrast, 30-70% of children with DS have persistent OSA despite T&A. Untreated pediatric OSA can have serious consequences such as pulmonary hypertension and neurocognitive dysfunction.
Ron Mitchell	Otolaryngology	The demographics, comorbidities, and polysomnographic characteristics of children with OSA under 3 years old	We hypothesize that the predictors of severe OSA in children over 3 will also affect this younger population; these include age, gender, BMI z-score, and ethnicity. We also hypothesize that anatomical and physiologic changes that occur in the first 3 years of life can potentially affect the severity of OSA and the level of risk for T&A complications.
Kathleen Ludwig	Pediatric Hematology/Oncology	Reducing Ethnic Disparities in Acute Leukemia (REDIAL) Consortium Retrospective Chart Review	However, there are many significant side effects related to treatment of childhood cancers. For example, stroke-like symptoms, aphasia, and slurred speech have been associated with methotrexate, a drug used in the treatment of acute lymphoblastic leukemia (ALL). This study seeks to compile a repository of childhood ALL cases in order to better predict treatment outcomes and potential drug toxicities.
Susan Iannacone	Pediatric Neurology	Genotype-Phenotype Correlation for Patients with Duchenne and Becker Muscular Dystrophy	Duchenne Muscular Dystrophy (DMD) is a neuromuscular degenerative disorder that is disabling and life-threatening. It is an X-linked recessive genetic disorder seen in young boys

			<p>and is caused by a frameshift or nonsense mutation in the dystrophin gene which leads to myofiber damage. Dystrophin is an important protein that helps connect the intracellular cytoskeleton to transmembrane proteins which are connected to the extracellular matrix. Becker Muscular Dystrophy (BMD) is a phenotypically milder form of the dystrophic muscle disease. Affected individuals have a partially functional dystrophin protein. Boys with DMD/BMD develop progressive proximal muscle weakness that leads to deterioration of ambulation, wheelchair dependency, and eventual respiratory and cardiac failure.</p>
Jeff Waugh	Pediatrics	Physicians' Diagnosis and Chart Coding Patterns of Functional Neurological Disorder	<p>In order to ensure best practices in diagnosing and treating patients who suffer from FND, it is crucial to investigate the extent of these discrepancies, identify the reasons that lead clinicians to not include FND-related codes in their clinical records, and establish steps to improve the accuracy of diagnosis and coding of this disorder. In this study, we hypothesized that in patients with clinically-recognized FND, their consulting neurologist would include FND-related ICD-10 codes in less than 50% of patients.</p>
Kimberly Goodspeed	Pediatrics Neurology and Neurotherapeutics Psychiatry	Characterization of the CDG-SRD5A3 Clinical Spectrum	<p>We hypothesize that hypotonia and nystagmus will be the most consistent symptoms across patients in the CDG-SRD5A3 cohort, and we will assess this hypothesis through two aims. Aim 1: to determine the spectrum of specific clinical symptoms across patients with CDG-SRD5A3 gene mutations. We will utilize the existing literature in conjunction with a review of unpublished cases through partnership with a disease-specific family foundation to determine the relative prevalence of the most commonly</p>

			<p>reported signs and symptoms associated with CDG-SRD5A3 mutations. We will also conduct a cross-sectional study including standardized phone interviews and an adaptive rating scale to assess current level of functioning. We will assess the range of severity of symptoms and evaluate for genotype-phenotype correlations. Aim 2: to utilize symptom prevalence data to create a modified version of the Clinical Global Impressions (CGI) scale tailored to CDG-SRD5A3 gene disorders.</p>
Jo-Ann Nesiama	Pediatrics- Emergency Medicine	Outcomes of Children with Blunt Abdominal Trauma After Interfacility Transfer to a Pediatric Trauma Center	<p>The main purpose of the study is to determine the outcomes of children with blunt abdominal trauma who have been evaluated at an outside facility and then transferred to a level I pediatric trauma center in order to determine if a modification in the transfer decision process is warranted. The secondary aim of this study is to categorize the transferring hospitals based on their trauma capabilities to determine transferring patterns and develop educational interventions.</p>
Yasin Dhaher	Physical Medicine & Rehabilitation Orthopaedic Surgery	Informing injury prevention strategies for the female athlete: the effect of fluctuating estrogen on muscle fiber type.	<p>We hypothesize that muscle specific micro-RNA expression will be altered by changes in systemic estrogen levels during the menstrual cycle. Specific Aims In this study we aim to indirectly characterize estrogen mediated changes in muscle fiber composition by measuring the expression of muscle specific micro-RNA in circulation. In order to induce the release of micro-RNA into the blood, subjects will be asked to walk on a cross-tilted treadmill while their blood is collected at predetermined times in the experiment to be analyzed.</p>
Shai Rozen	Plastic Surgery	Anatomical Study Analyzing Platysma Innervation	<p>We hypothesize that by looking at the anatomical structure of the platysma and DLI, we can apply our findings to conduct a fascicular turnover flap</p>

			between the platysma nerve branches and DLI nerve branches to strengthen DLI and thus improve smile after a platysma rmyectomy.
Nicholas Haddock and Sumeet Teotia	Plastic Surgery	Comparative outcomes of breast reconstruction in triple-negative breast cancer patients: A risk profile analysis	Given that triple-negative breast cancer is a more aggressive type of cancer that requires intense combinations of therapy, we predict that the frequency of breast reconstruction will be lower in these patients due to the higher likelihood of going through 3 to 4 more major surgical procedures with regular follow-up appointments. Additionally, we expect triple-negative patients to have gone through more chemotherapy and radiation treatment than other breast cancer patients and thus will be associated with more complications in reconstructive surgery
Nicholas Haddock and Sumeet Teotia	Plastic Surgery	Postoperative Complications in Patients Undergoing Breast Reconstruction after Neoadjuvant Breast Cancer Therapy	With the potential to reduce the tumor burden and potentially have a less extensive surgical operation, we predict that patients undergoing neoadjuvant therapy prior to a mastectomy could potentially be spared from severe complications and enjoy better surgical outcomes.
	Plastic Surgery	Prepectoral Versus Subpectoral Tissue Expander Breast Reconstruction: A Historically Controlled, Propensity Score Matched Comparison of Perioperative Outcomes	Studies in a rodent model have demonstrated severe aortic endothelial damage following short-term ischemia and reperfusion. Other studies have demonstrated a significant association between lower core temperature and increased flap survival, likely due to slower depletion of oxygen dissolved in donor tissue. We hypothesize that endothelial integrity of composite human micro-vessel grafts will be positively impacted by cold ischemia. Furthermore, we hypothesize that endothelial integrity of composite micro-vessel grafts will be negatively impacted by increased ischemia time and reperfusion.
Mustafa Husain	Psychiatry	The Golden Years Imprisoned: Assessing the Cognitvie Ability	To determine if there is a correlation between past lead exposure and cognitive ability, anxiety and

		and Mental Well-Being of Geriatric Inmates in the Dallas County Jail	depression status in inmates 60 years old or older at the Dallas County Jail.
Carol North	Psychiatry	Research in Community Mental Health and Psychiatric Epidemiology	I will be conducting a qualitative analysis of data sets collected from three time points from first responders and victims of the Oklahoma City Bombing in 1995. I will be looking for any patterns and any shared experiences or symptoms within the data set.
Carol North	Psychiatry	Tobacco and Drug Use and Personality among 9/11 Disaster Survivors	Individuals with direct exposure to 9/11 disaster trauma had increased tobacco and other drug use and detectable incidence of tobacco and drug use disorders after the disaster. Low cooperativeness and low self-directedness will be significantly associated with increased tobacco and drug use and development of tobacco and drug use disorders.
Todd Aguilera	Radiation Oncology	Comparing Patterns of Local Failure of Neoadjuvant SBRT and CFRT for Pancreatic Cancer	Stereotactic body radiation therapy (SBRT) is a relatively modern radiation oncology treatment technique compared to conventionally fractionated radiation treatment (CFRT). In brief, radiation treatment is typically fractionated: the total radiation dose given is divided into portions. Also, modern technology allows for accurate delineation of tumor and healthy tissue, allow for more radiation to be delivered to the tumor and less to the health tissue. CFRT is typically 25-28 fractions (for pancreas radiation treatments) and has a wider field of radiation (i.e. more healthy tissue gets hit by radiation). SBRT is typically 2-5 fractions and a narrower field that better spares healthy tissue.
Kevin Albuquerque	Radiation Oncology	Mapping of Nodes PAN From Indigent US Population and CTV	A cohort of patients with locally advanced cervical cancer requires para-aortic nodal (PAN) irradiation,

		Construction for Validation of External Paraortic Atlas	specifically if those lymphnodes are involved. PAN radiation was previously delivered with techniques that were associated with significant acute and late toxicity. Due to this, the development of more conformal radiotherapy techniques began. One of them was Intensity Modulated Radiotherapy (IMRT), which delivers high-precision radiotherapy to a target volume. IMRT requires a precise target volume and as such target volume definition is now critical for ensuring accurate coverage of micrometastatic disease in the PAN region.
Michael Folkert	Radiation Oncology	Review of Outcomes for Definitive Treatment for Hepatocellular Carcinoma with SBRT and Development of Radiomic Response Models for Outcome Assessment	It is hypothesized that TACE and SBRT provide patients safer alternatives to treating HCC lesions, with combination TACE+SBRT conferring higher survival rates. Our preliminary goal is to therefore review clinical experience with different treatment plans using a national cohort and comparing outcomes of patients who have undergone SBRT.
Puneeth lyengar	Radiation Oncology	Influence of Medicinal and Hematologic Parameters on Cachexic Cancer Survival	Determine whether there exists an association between hematologic parameters and patient medications on the extent of cancer associated weight loss (cachexia), and whether their use influences patient outcomes.
Nathan Kim	Radiation Oncology	Examining the Effects of Aspirin/Anticoagulant Use, and other parameters pertinent to modern day therapy on prognosis, in Breast Cancer Patients that have received neoadjuvant chemotherapy and have not had a complete response.	Our hypothesis is that aspirin and anticoagulant therapy through its anti-platelet effects reduces risk of distant metastases, and we believe this is particularly important in tumors with significant distant metastatic potential. Patients undergoing neoadjuvant chemotherapy who did not have complete response are at particularly high risk for recurrences. Therefore, we hypothesize that aspirin/anticoagulant use can also reduce risk of distant metastases in patients that have received neoadjuvant chemotherapy but have not had a complete response.

Kiran Kumar	Radiation Oncology	Pediatric Radiation Oncology with Movie Induced Sedation Effect (PROMISE)	We hypothesize that the use of PROMISE will decrease the percentage of pediatric patients ages 3-7 who will require general anesthesia, from 70% (institution historical control from 2018-19) to 30%. Furthermore, compared with those who require general anesthesia, we estimate that PROMISE will improve patient/family-reported health quality of life, decrease patient anxiety, improve clinical efficiency, and decrease overall healthcare costs.
Kiran Kumar	Radiation Oncology	Optimizing Palliative Focal Radiation Therapy Dose in Primary Cutaneous T-Cell Lymphoma	This retrospective review will assess the clinical response in patients with CTCL treated with focal RT to a total dose of 4, 8, or 12 Gy. This will include overall response rates, freedom from treatment failure at specific time points (6 and 12 months), and toxicities. We hypothesize that treatment to 4 Gy is as effective in terms of response and freedom from treatment failure (FFTF) rates as 8 Gy with similar, minimal toxicity.
Kiran Kumar	Radiation Oncology	CAR T-cell Therapy in Non-Hodgkin's Lymphoma: Analysis of Patterns of Failure and Role of Radiation Therapy	In order to better understand which sites of disease are most likely to fail, we propose a retrospective review of all patients at UT Southwestern who have received CAR-T for NHL to analyze patterns of failure. We hypothesize that FDG-avid disease on pre-CAR-T and day 30 post-CAR-T PET/CTs will be predictive of the most likely sites of local failure, and that those sites which received 'bridging' RT prior to CAR-T are less likely to recur than those which did not.
David Sher	Radiation Oncology	Predictors of post-treatment toxicities in head and neck cancer patients.	In this study, we will identify patient specific, disease specific, and treatment specific variables that predict PTT. Hypothesis: Tumor site, smoking status, and X-ray dose are significant predictors of PTT. Specific aims: Identify demographic, disease-specific, and treatment specific characteristics that significantly impact the

			patient quality-of-life in the domains of dysphagia and chronic pain.
Avneesh Chhabra	Radiology	In Patients Predisposed to Losing Bone-Muscle Mass While Undergoing Androgen Deprivation Therapy (ADT) During the Treatment of Prostate Cancer, What can be Gleaned from the Prospective MRI Evaluation of Muscle Mass, Fatty Change and Functional Diffusion Characteristics?	The purpose of this study was to classify the meniscus tears using the validated system of ISAKOS grading and correlate the findings of meniscus tear and cartilage damage on MRI and arthroscopy with patient functional outcomes. Hypothesis: We hypothesized that extent of meniscus tear and cartilage loss will correlate with the patient outcomes
Caroline Park	Surgery - Burn/Trauma/Critical Care	Utilization of a Novel Real-Time Haptic Feedback Reciprocal System for Increasing Efficacy of Surgical Education Methods	The utilization of the novel haptic feedback system for surgical procedure educational purposes will lead to increased ability in treating thoracic trauma with a tube thoracostomy while decreasing the amount of preventable complications that could lead to negative outcomes for the patient.
Sara Hennessy	Surgical ICU	Reducing Costs Associated with IV Levothyroxne	We hypothesize that we can reduce the medication costs associated with administration of IV levothyroxine by switching hospitalized patients to oral/enteral levothyroxine or holding their dose for 72 hours until patients are able to take enteral medications. Due to the proven, well-tolerated weekly administration and long half-life of the medication, if patients are unable to take oral medication (or are NPO), administration of IV levothyroxine can be held for 2-3 days with minimal impact for patients. Yearly, these new measures could save the hospital around \$50,000-\$85,000 in medication costs and can reduce the risk of medication errors with the administration of the IV formulation. Therefore, the objective of this project is to evaluate the budget impact of switching patients from IV to oral

			levothyroxine or holding their levothyroxine dose when appropriate, from the perspective of the institution.
Kemp Kernstine	Thoracic Surgery	A Comparison of Post-Operative Outcomes in non-Thymomatous Myasthenia Gravis Patients Based on Type of Thymectomy Performed	Myasthenia gravis (MG) is an autoimmune disorder in which approximately 80% of patients produce autoantibodies against acetylcholine receptors on their neuromuscular junctions, which results in cell-mediated lysis of cells. This condition leads to progressive weakening of skeletal muscles and severe impairments.
Alaina Garbens	Urology	Oncological Outcomes and Opioid use in Magnet Assisted Robotic Radical Prostatectomy	Robot-assisted laparoscopic radical prostatectomy (RALRP) is the most common surgical approach for radical prostatectomy in the USA and much of the developed world. While RALRP is a safe procedure, with low transfusion and perioperative complication rates, cosmesis and pain from port sites remain an issue.
Philippe Zimmern	Urology	Urinary PH Changes During Antibiotic Therapy for Urinary Tract Infections in Post-Menopausal Women	The goal of this research will be to evaluate the yield of cystoscopy and voiding cystourethrogram (VCUG) in women with RUTIs.
Melissa Kirkwood	Vascular Surgery	The Cost Effectiveness of Post-Operative Superficial Femoral Artery Stent Patient Surveillance	Well established protocols exist for surveillance following lower extremity arterial bypass in vascular patients. Endovascular intervention with superficial femoral artery (SFA) angioplasty and stenting are being performed more frequently now compared to arterial bypass. No agreed upon protocols exist for the follow up of these patients.
Melissa Kirkwood	Vascular Surgery	Radiation Doses to Patients and Operating Room Staff during Complex Embolization Procedures	We believe that the use of Live-Image Digital Zoom with dual fluoroscopy will decrease dose to patients and operating staff during complex embolization procedure compared to embolization procedures performed with standard magnification.

