Results: Of the 89 programs, 61 (68%) had a social media presence and 107 total social media accounts were identified. All programs with social media presence had been accredited for at least two years. Social media characteristics of programs are profiled in the Table. Three programs (3%) offered virtual sub-internships on VSAS, and no sub-internship opportunities were identified on any social media accounts. Twelve programs had updated their websites to reflect changes in protocol due to COVID-19.

Conclusions: COVID-19 has altered the way we conduct business within graduate medical education. Given the ubiquitous restrictions in place pertaining to sub-internships and visitations, social media has become a cornerstone of recruitment and knowledge for residency programs and prospective applicants alike. Individuals and institutions have potential to engage with those outside their normal scope owing to increased social media outreach and efforts. Perhaps this shift toward digital engagement will persist and have lasting impact.

Abstract No. 139

Post-discharge complications of percutaneous biliary interventions in a large academic medical center

A. Kolarich1, S. Golden1, A. Solomon1, S. Pang2, R. Wang2, P. Gowda2, C. Georgiades2, B. Holly2; 1The Johns Hopkins Hospital; 2Johns Hopkins University School of Medicine

Purpose: Percutaneous biliary interventions are becoming increasingly available and complex. However, little data exists on the type and prevalence of complications after patients are discharged.

Materials and Methods: A retrospective review of all adult patients who underwent initial percutaneous biliary drain (PBD) placement between January 1, 2016, and December 1, 2018, was performed with patient follow-up through May 15, 2020. Patients discharged with a PBD were then identified; those who were discharged to hospice or with documented plans for outside follow up were excluded. All patients underwent drain exchange during each cholangiogram per local practice pattern. An outpatient indication for cholangiogram was defined as direct admission from the emergency department or outside hospital with cholangiogram performed within 72 hours of initial admission or patients who presented directly to interventional radiology for PBD interrogation. Indications were standardized into 13 unique categories based on previously described complications of biliary interventional procedures; combination indications were coded into the most clinically severe complication.

Results: 157 patients met inclusion criteria. There were 402 cholangiograms in 111 patients with outpatient indications. 267 (66.4%) cholangiograms were unplanned. 89 of 157 (56.6%) patients discharged with a PBD experienced at least one unplanned exchange; indications are presented in the Table.

Factors associated with increased number of percutaneous biliary drain exchanges were evaluated. There was no difference in benign or malignant etiology (1.6 vs 1.7, P = 0.881) or initial indication of obstruction or leak (1.9 vs 1.1, P = 0.093). Women had a significantly higher number of unplanned exchanges (3.1 vs 1.1, P = 0.001). When patients with underlying malignancy were isolated, patients with cholangiocarcinoma had more unplanned outpatient exchanges than those with other malignancies leading to PBD placement (2.1 vs 1.1, P = 0.01).

Conclusions: Outpatient complications in patients discharged with percutaneous biliary drains requiring repeat cholangiogram are common, with over half of patients experiencing at least one unplanned exchange. Women and patients with cholangiocarcinoma appear to be at increased risk of these events.

Abstract No. 140

Impact of program director panel on medical student confidence in the NRMP during the COVID-19 pandemic

A. Khayat1, R. Abboud2, A. Farag3, G. Vatakencherry4; 1NYU Long Island School of Medicine; 2Wake Forest Medical School; 3University of Kentucky; 4Kaiser Permanente Los Angeles

Purpose: Though efforts to curtail the spread of COVID-19 have flattened the curve, it has had a deleterious impact on not only medical education, but also the residency application process. New limitations have severely restricted applicants. The purpose of this study was to assess the impact that a webinar with residency program directors had on medical student applicants’ confidence in applying to interventional radiology residency programs during the COVID-19 Pandemic.

Materials and Methods: Medical students were invited to attend a virtual webinar with multiple residency program directors to discuss the application process. Of the 95 survey responders, the percentages of MD, DO, and IMG candidates were 69.5%, 21.0%, and 9.5%, respectively. Furthermore, 58.9% were expected to graduate in 2021, 21.1% in 2022, and 17.9% in 2023; 2.1% graduated in 2020. Prior to and directly after the webinar discussion, attendees were asked to fill out a survey evaluating their aplomb in and knowledge of the application process. A Likert scale was used to measure responses to each statement. Comparative analyses were accomplished via two-sample t tests.

Results: The data was stratified between applicants who were expected to apply in 2021 and those who plan on applying in ensuing years. The Likert scale was organized such that each response was assigned a number between one and four: one for “strongly disagree,” two for “disagree,” three for “agree,” and four for “strongly agree.” Statistical analysis revealed significant differences in all survey results (z < 0.05).
Comparing pre- and post-webinar responses, applicants had a significantly improved conception of what they must do prior to and during the application process (P < 0.01). Furthermore, applicants reported a significantly greater degree of confidence in the NRMP (P < 0.01).

**Conclusions:** In this study, it was found that the virtual webinar did have a significant positive impact on applicants’ assurance in and understanding of the NRMP. Furthermore, fears concerning new limitations imposed upon applicants – such as not being able to pursue away rotations – were also alleviated. Interventional radiology is one of the most competitive specialties, with the highest applicant to available position ratio of 4.53 and the 7th highest average USMLE Step 1 score. Thus, the dissemination of appropriate information to applicants is integral to their success. Overall, this analysis suggests that virtual webinars and program director communication are a powerful tool that can promote applicants’ confidence in and knowledge of the NRMP in the face of the COVID-19 Pandemic and its concomitant challenges.

**Abstract No. 141**

**Double-barrel iliocaval reconstruction using novel closed-cell dedicated venous stents**

R. Korff, J. Titano, V. Bishay, A. Fischman, F. Nowakowski, R. Patel, E. Kim, A. Vouyouka, R. Lookstein, Mount Sinai Health System; Interventional Radiology, Icahn School of Medicine at Mount Sinai; Mount Sinai Hospital; Mount Sinai Hospital

**Purpose:** The aim of this study was to examine the outcomes of double-barrel reconstruction using novel closed-cell dedicated venous stents for the treatment of iliocaval deep venous thrombosis (DVT).

**Materials and Methods:** From June 1, 2019, to May 31, 2020, 17 patients with DVT underwent double-barrel iliocaval reconstruction with Boston Scientific Vici Venous Stents at a single academic center. Five patients who had undergone previous endovascular iliocaval repair were excluded from analysis. In the remaining 12 patients, the mean (range) age was 48 (27-78) years, and the cohort was 58.3% female. The most common presenting symptoms of venous disease were lower extremity swelling (91.7%) and pain (41.7%). CEAP clinical classification was C3 in all patients. DVT was chronic in 58.3% (7) and acute in 41.7% (5) of the patient cohort. 42.7% of patients had an inferior vena cava (IVC) filter at the time of treatment. During iliocaval reconstruction, 6 of the 12 patients underwent concurrent pharmacomechanical thrombectomy. The number of stents placed ranged from 2 to 5.

**Results:** Technical success was achieved in 100% of cases. With a median follow up period of 5.7 months, ranging from 11 days to 13.5 months, the freedom from reintervention rate was 91.7%. Eleven of 12 patients achieved subjective improvement or resolution of symptoms. The major adverse event rate was 8.3%, as one patient had an access site complication requiring intervention.

**Conclusions:** Double-barrel iliocaval reconstruction with novel closed-cell dedicated venous stents for the treatment of acute and chronic DVT is technically feasible and clinically effective with a low reintervention rate.

**Abstract No. 143**

**The patient and their port microbiome: a retrospective review of port infection leading to removal with microbiologic correlation**

J. Wakim, D. DePietro, I. Xi, G. Nadolski, T. Gade, S. Hunt, University of Pennsylvania, Philadelphia, PA; Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; Hospital of the University of Pennsylvania, Philadelphia, PA; Department of Radiology, University of Pennsylvania

**Purpose:** The purpose of this study is to characterize the pathogens causing port-related infections and identify patient factors related to infection.

**Materials and Methods:** Single-institution quality database (Hi-IQ) was used for retrospective identification of patients who underwent port removal for infection in calendar year 2019. Manual review of the clinical and imaging record was performed to identify outcomes and laboratory data. Stata v10.2 was used to correlate outcomes with microbiology data using multivariate regression.

**Abstract No. 142**

**Percutaneous interspinous spacer placement for neurogenic intermittent claudication in cancer patients with lumbar spinal stenosis**

J. Stringam, J. Kuban, S. Chen, S. Yevich, C. Tatsu, R. Sheth, MD Anderson Cancer Center

**Purpose:** To evaluate the use of the Superion (Boston Scientific) percutaneous interspinous process spacer (IPS) for the treatment of neurogenic intermittent claudication (NIC) in cancer patients due to lumbar spinal stenosis (LSS) and explore the special therapeutic advantages, considerations, and challenges involved in treating the cancer patient population.

**Materials and Methods:** This single-institution retrospective study evaluated the treatment of 15 lumbar vertebral levels in 9 cancer patients (6 men, mean age 71 years). Eligible patients included those with clinical signs and symptoms consistent with NIC. Outcomes were assessed based on patient-reported pain scores (Brief Pain Inventory, BPI) and imaging metrics.

**Results:** LSS was due to a variety of factors in the study population, including disc bulge (7/9), facet arthropathy (4/9), ligamentum flavum thickening (6/9), and epidural tumor (3/9). There was a significant improvement in pain scores following IPS (median pre = 7, post = 3, P = 0.005). Likewise, there was significant improvements in cross-sectional areas of the central canal (median percent increase 16.9, P < 0.001) and bilateral neuroforamina (right = 22.5, P = 0.007; left = 33.5, P = 0.002) following IPS placement. There was no delayed incisional healing despite prior lumbar spine radiation (3/9 patients). One patient experienced an asymptomatic complication of spinous process fracture following the procedure.

**Conclusions:** IPS is safe and effective for the treatment of NIC in cancer patients. Although life expectancy in this patient population may be less than that of the general population, pain palliation remains a meaningful and achievable goal with this minimally invasive technique.