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**Conclusions:** Age, maximal tumor dimension and red cell distribution width are independent predictors of intrahepatic recurrence after microwave ablation of HCC < 3 cm. Proximity to diaphragm, capsule or large vessel did not significantly affect local recurrence at the ablation margins.

### Abstract No. 586

#### COVID-19 era changes in procedural volume in interventional radiology versus other surgical specialties at a tertiary care hospital

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**Purpose:** The coronavirus 2019 (COVID-19) pandemic resulted in major reorganization and limitations of clinical activities, changing the landscape for procedure-based specialties. We evaluated the change in case volume for interventional radiology (IR), gastroenterology (GI), and surgery (OR) during the lockdown period (LDP) for COVID-19 at a tertiary care hospital in New York State.

**Materials and Methods:** Retrospective analysis of the surgical procedures performed at a New York State tertiary care center during the LDP was performed. Comparison was made between LDP time period from March 15, 2020, to May 17, 2020 (LDP COVID), the 9-weeks immediately prior to LDP January 12, 2020, to March 15, 2020 (2020 pre-COVID), and the same time period in 2019 (2019 non-COVID), was performed. A univariable analysis was conducted for all IR procedures with specific attention paid to a subset of emergent procedures with overlap between the 3 specialties (percutaneous abscess drainage, gastrostomy, nephrostomy and cholecystectomy tube placement vs. percutaneous endoscopic gastrostomy (PEG), appendectomy, cholecystectomy, and cystoscopy stent placements). *P* values were calculated with a two-sample t-test. Statistical significance threshold was set at 5%. Statistical analysis was performed using Microsoft Excel.

**Results:** A total of 2105 IR procedures (LDP COVID: 551; 2020 pre-COVID: 721; 2019 non-COVID: 833) were included. During LDP COVID, case volume decreased by 23.6% ( $P < 0.023$ ) and 33.9% ( $P < 0.117$ ) when compared with 2020 pre-COVID and 2019 non-COVID, respectively, these were not statistically significant. Specifically examining the subgroup of emergent IR procedures, there was a 41.7% (188 vs. 322,  $P < 0.064$ ) and 38.0% (188 vs. 303  $P < 0.045$ ) decrease from the LDP compared to 2020 pre-COVID and 2019 non-COVID time intervals, respectively.

For other procedural specialties, there was a 62.1% (113 vs. 298,  $P < 0.066$ ) and 65.3% (113 vs. 326  $P < 0.041$ ) decrease in cases performed when compared to 2020 pre-COVID and 2019 non-COVID.

**Conclusions:** The census of our hospital during the height of the pandemic was over 40% COVID positive patients. This led to drastic changes to the schedule and workflow of patients. Volume in procedural specialties decreased as a result of the COVID pandemic. Non-IR specialties experienced a more prominent decrease in procedural volume during the LDP when compared to similar times before the pandemic. This is in stark contrast to IR, which did not see a statistically significant drop in the total amount of procedures performed due to the large volume of minimally invasive procedures performed in critically ill in-patients.

### Abstract No. 587

#### Magnetic resonance imaging-guided cryoablation of de novo solitary pathologically proven T1a renal tumors

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**Purpose:** To evaluate the long-term oncologic efficacy and survival rates of MRI-guided cryoablation ablation (PCA) for pathologically proven T1a Renal cell carcinoma (RCC).

**Materials and Methods:** we retrospectively reviewed our renal ablation data base between January 2007 and December 2019, we included only patients with solitary de novo histologically diagnosed T1a RCC ( $\leq 4$  cm) who underwent MRI-guided Cryoablation. Patient with recurrent or bilateral RCC, genetic syndromes, patient not pathologically proven to be RCC (benign lesions or nondiagnostic) and patients who underwent CT-guided cryoablation or Radio-frequency ablation were excluded. For each patient, we recorded: Demographics, tumor size and histology, complications, recurrence at ablation site, development of metastases, history of another malignancy, survival/death and cause of death. survival outcome were estimated using Kaplan and Meier product-limit estimator.

**Results:** Twenty-three MRI-guided procedures were performed for 23 lesions in 23 patients (13 males and 10 females, average age 70 years (50–92 years). Average tumor size was 2.1cm (range, 1–3.4 cm). The average follow-up for all subjects was 3.6 years (range: 0.18–9.73 years). Only 1 patient (4.3%) developed grade III complication according to the Clavien-Dindo classification. The most common pathology was clear cell RCC ( $n = 17$ ) and 6 lesions were papillary RCC. Fuhman grading was obtained in 21 lesion (grade I = 5 and grade II = 16) None of the patients developed local recurrence at the ablation site, elsewhere in the kidneys or metastasis from RCC. Fifteen patients had another primary malignancy other than RCC. The local recurrence free-, Disease free-, Metastasis free- and cancer specific survival (CSS) were 100 %.

**Conclusions:** MRI-guided cryoablation is a safe and highly efficacious modality for treatment of small renal tumors. Long-term follow-up data reveals long standing oncologic control with low complication rate.

### Abstract No. 588

#### Effect of relative increase in nurse and technologist staff: utilizing lower COVID-19 case volume as a model for examining increased staffing ratio on room turnover efficiency

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**Purpose:** Efficient interventional radiology (IR) procedure room utilization relies on various healthcare professionals performing clinical and nonclinical tasks to minimize room downtime. The coronavirus-19 (COVID) pandemic offers insight into the importance of staff ratios in improving room utilization, by evaluating the effect of a relative increase in support staffing in the setting of reduced physician staffing and reduced overall case volume.