pelvic pain, urinary symptoms, and ejaculatory pain. It is diagnosed by semen, urine, or prostatic secretions cultures. Classic treatments usually focus on symptomatic relief with 4–6 weeks repeated courses of fluoroquinolones and anti-inflammatory agents; however, more than 50% of these patients experience repeated recurrence of infection and worsening symptoms. Our study aims at assessing early results of prostatic artery embolization (PAE) in four patients with recurring CBP. **Methods:** From March to December 2018, four cases with CBP diagnosed by semen cultures all presenting with recurring symptoms and infection for 4 times per year or more, with mean prostatic volume of 42 cc, were referred to us by urologists for PAE. Patients were consented it is a clinical trial. All patients received a 4 weeks preprocedural course of fluoroquinolone or nitroferuntoin according to culture then stoppage for a week then repeating the culture. On a negative culture basis, bilateral PAE was done with 100–300 μ spherical particles. **Results:** Bilateral PAE was feasible in the 4 patients with complete disappearance of prostatic blush and pruned prostatic artery as angiographic endpoint. No major complications occurred. Postoperative dysuria and urgency took place for a week. Prostate size decreased to a mean of 33 cc 1 year after embolization. Three patients reported marked subjective improvement of urinary symptoms; none of them needed further cultures for 1 year. One patient had recurring symptoms 7 months after embolization despite decrease in prostate size and was treated by regular measures. **Conclusion:** In our very small series, PAE has shown a potential role in the treatment of CBP; further studies are needed on larger number of patients are needed for proper procedure assessment.

OR4.10

Image-Guided Percutaneous Sclerotherapy of Orbital Low-Flow Vascular Malformations

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Objectives: To evaluate the effectiveness and safety of percutaneous sclerotherapy using bleomycin for orbital low flow vascular malformations. **Methods:** Between October 2015 and August 2019, we prospectively evaluated 24 patients who clinically and radiologically diagnosed with orbital low-flow vascular malformations. Sixteen females and eight males were included in the study, ranging in age from 3 to 46 years (mean: 13.4 ± 10.3). Twenty-two patients presented with proptosis and limited ocular motility, 15 patients with dystopia, and 2 patients with amblyopia and exposure keratitis. Ophthalmological assessment, ultrasound, and magnetic resonance imaging were performed before and 6 weeks after treatment. Under general anesthesia, orbital lesions were punctured guided by ultrasound, fluoroscopy, and cone-beam computed tomography. Before sclerotherapy, small volume of Omnipaque was injected to exclude vascular communication or contrast leakage, and then bleomycin was instilled. Procedures were repeated at 8-week intervals, depending on clinical and radiological response. The follow-up period ranged from 3 to 40 months, with a mean: 19.5 ± 12.4. **Results:** Fifteen patients were diagnosed with lymphatic malformations, and nine patients with venous malformations. Forty-one sclerotherapy sessions were performed (range: 1–3, mean: 1.7 ± 0.8). Bleomycin dose ranged 2–20 IU (mean 7.2 ± 4.6). Clinically, there was a significant reduction in the degree of proptosis ($P = 0.001$) and dystopia ($P = 0.002$), with no significant changes in the visual acuity. Radiologically, there was significant reduction in the maximum lesions diameters and volumes ($P = 0.001$ and $P = 0.005$, respectively). Transient pain, edema, and ecchymosis occurred following the procedure with no major complications encountered. **Conclusion:** Intralesional bleomycin therapy could be a safe and effective treatment for orbital low-flow vascular malformations with low rate of complications.

OR4.11

Dosimetry of Vascular and Interventional Radiology Procedures: Five-Year Analysis in a Tertiary Care Institution in Saudi Arabia

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Objectives: To evaluate the dosimetry of vascular and interventional radiology (IR) procedures at a single tertiary care institution and compare it to the previously reported international diagnostic reference levels. **Methods:** This was a retrospective review of the radiation doses recorded by the dose management software (DoseWatch™) for all vascular and interventional procedures done between January 2015 and December 2018 at King Abdulaziz Medical City, Riyadh, Saudi Arabia. Pediatric procedures were excluded from the current analysis. The height, weight, age (>14 years), sex, reference dose point air kerma (mGy), dose area product (DAP) (Gy.cm^2), and fluoroscopy time (s) were collected, and the body mass index (BMI) was calculated. Categorical data are presented as percent frequencies. Continuous variables are presented as mean, median, standard deviation, 25th and 75th percentile, and ranges. Two independent sample *t*-test was used to compare our study mean values with RAD-IR study and CIRD study. Person's correlation was performed to assess for the correlation between the study variables. Statistical significance was defined as $P < 0.05$. SAS Version 9.4 (Cary, NC, USA) was used for all the analyses. Graphic representations were created using spreadsheet software (Excel 2017; Microsoft, Redmond, Washington, USA). **Results:** Data of 3444 procedures in 2333 adults were recorded. The study included 1935 male patients (56.18%) and 1509 female patients (43.82%) with a mean age of 56.6 (15–117 years). Analysis of 22 different IR procedures was done. Peripherally inserted central catheter placement was the most commonly performed procedure ($n = 1045$, 30.3%) followed by tunneled catheter placement ($n = 784$, 22.76%), gastrostomy ($n = 392$, 11.4%), and percutaneous transhepatic cholangiography ($n = 205$, 5.95%). Trans jugular intrahepatic portosystemic shunt (TIPSS) creation had the highest mean fluoroscopy time (78.65 min) followed by uterine fibroid embolization (33.47 min), TIPSS revision (31.79 min), and varicocele embolization (31.75 min). TIPSS creation had the highest mean DAP (1649.35 Gy.cm^2) followed by hepatic chemoembolization (588.64 Gy.cm^2), hepatic artery mapping (573.75 Gy.cm^2), and TIPSS revision (539.12 Gy.cm^2). TIPSS creation was associated with the highest mean reference dose (6.72 Gy), followed by hepatic chemoembolization (3.18 Gy), hepatic artery mapping (2.44 Gy), and embolization (2.24 Gy). Compared to a recent and the RAD-IR studies, TIPSS creation and transarterial chemoembolization are

associated with significantly longer fluoroscopy time and higher DAP and Dose reference (DR). Although nephrostomy, gastrostomy, and biliary interventions were performed in significantly shorter fluoroscopy times compared to prior studies, this did not translate into significant reduction in DAP or DR in most cases. The result showing a significant positive correlation of BMI and DAP (R = 0.09410, P < 0.0001). **Conclusion:** This analysis establishes the dosimetry of the most commonly performed vascular and interventional procedures in a tertiary care center in Saudi Arabia. This comparison indicates the need for stricter radiation precautions to further comply with international standards.

P101

Role of Positron Emission Tomography/Computed Tomography in Lesion Characterization and Biopsy Guidance in Malignant Biliary Obstruction

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Objectives: This prospective study was conducted to evaluate the diagnostic impact of positron emission tomography/computed tomography (PET/CT) in patients with malignant biliary obstruction (MTBO) and if the metabolic information provided by PET/CT scan adds an incremental benefit while performing PET/CT-guided biopsies. **Methods:** This study was carried out from March 2016 to March 2018 for 52 patients diagnosed/suspected to have MTBO. They were investigated by PET/CT. Results were compared with contrast-enhanced CT in about 42 cases and with magnetic resonance cholangiopancreatography (MRCP) in about 15 cases. A group of patients have undergone PET/CT-guided biopsy (Number 15). **Results:** Our study revealed that sensitivity, specificity, positive predictive value, and negative predictive value for PET/CT were 92%, 75%, 96%, and 60%, respectively, while for CT and MRCP were 68%, 60%, 85%, 20% and 60% 50%, 85%, 20%, respectively. PET/CT is more sensitive than CT and MRCP for lymph nodal and distant metastases detection. In our study, 20/52 patients have changed their management after PET/CT. PET/CT-guided biopsy providing representative sample and definitive diagnosis with technically successful in 100% of patients (15/15). **Conclusion:** PET/CT is more sensitive and specific than CT and MRCP in primary detection and staging of tumors causing MTBO. PET/CT has significant impact on patient management. PET/CT-guided biopsy increases the chance of obtaining a representative sample, minimizing sampling errors, and achieving definitive diagnosis both by directing biopsy to most metabolically active part of lesion and by choosing most feasible and most metabolically active lesion among multiple lesions.

P102

Role of the Cardiac-Synchronized Computed Tomography Angiography in Diagnosis and Follow-Up of the Dissection of Descending Thoracic Aorta

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Objectives: Computed tomography (CT) is crucial for the diagnosis of descending thoracic aortic (DTA) dissection, especially in emergency setting, due to its accuracy and ready availability. An appropriate and accurate imaging protocol permits not only to perform the diagnosis but to improve the clinical outcomes in these cases. Our aim is to identify a possible role of the cardio-synchronized CT angiography (CCTA) in the DTA. **Methods:** Twenty-three CCTAs (retrospective gating) in suspected acute aortic syndromes or in chronic thoracic dissections were retrospectively analyzed measuring total vessel areas (ToTA) and areas of the true lumen (TLA) and false lumen (FLA) (at two levels: 2 cm below the isthmus and 3 cm above the diaphragm), with measurements in two arterial phases (40% and 75% of the cardiac cycle) and in the venous one (no cardio-synchronized acquisition). **Results:** TLA average in the 40% and 75% phases was, respectively, 462 (SD=283) and 419 (SD=276) in the proximal site and 436 (SD=269) and 388 (SD=267) in the distal site, significantly larger in the 40% versus 75% phase at both sites (P < 0.0001). The data were inverted with FLA: It was smaller in the arterial phase at 40% than at 75% in both sites (proximal and distal). No significant differences emerged for the ToTA. In the venous phase, no statistically significant differences were seen between TLA, FLA, and ToTA. **Conclusion:** Intimal flap dynamic and lumen variations are significantly affected by the various phases of the cardiac cycle. CCTA in DTA dissection can represent a reliable imaging technique to accurately compare the patient examinations during the follow-up. Furthermore, in the presence of symptoms, CCTA can help promptly identify patients who could require treatment because of transient blood flow reduction, due to intimal flap motion along the cardiac cycle.

P201

Best Response during Repeated Chemoembolization Is the Most Significant Predictor of Survival in Hepatocellular Carcinoma

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Objectives: Whether initial or best response is the better predictor of overall survival after transarterial chemoembolization (TACE) for hepatocellular carcinoma (HCC) remains controversial. We retrospectively evaluated the clinical implications of initial and best responses during repeated TACE for HCC. **Methods:** This study included adult patients who received a diagnosis of intermediate-stage HCC with preserved liver function between 2007 and 2016 and who were treated with TACE as the first-line treatment. Evaluation of the treatment response was based on the modified Response Evaluation Criteria in Solid Tumors. **Results:** Of the 726 included patients, an objective response (complete response [CR] or partial response [PR]) was observed as the