

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

initial response in 78.1% of the patients. Regarding the best response during the TACE series, 87.2% of the patients were overall responders. Overall survival was similar between initial responders ( $n = 567$ ) and subsequent responders ( $n = 66$ ; 43.8 vs. 40.1 months,  $P = 0.433$ ). Likewise, overall survival was similar between initial CR ( $n = 366$ ) and subsequent CR ( $n = 144$ ) groups (52 vs. 46 months,  $P = 0.527$ ). Multivariable Cox analyses showed that the most significant independent prognostic factor predicting overall survival was an objective response as the best response. The adjusted hazard ratio of the responders as the best response (0.216) was lower than that of the responders as the initial response (0.493). **Conclusion:** The best response observed during serial TACE, rather than the initial response, most strongly predicted overall survival in patients with intermediate-stage HCC and preserved liver function.

## P202

### Combined Transarterial Chemoembolization and Microwave Ablation Therapy for Hepatocellular Carcinoma: A Randomized Control Study

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**Objectives:** Few clinical researches have dealt with the treatment of patients with hepatocellular carcinoma (HCC) larger than 3 cm and smaller than 5 cm in the literature. We aimed to compare the feasibility and benefits of combined therapy (transarterial chemoembolization [TACE] and microwave ablation [MWA]) compared with TACE or MWA alone in the treatment of HCC larger than 3 cm and smaller than 5 cm. **Methods:** This was a prospective study consisting of 300 patients with solitary HCC larger than 3 cm and smaller than 5 cm. Our patients were randomized into three groups; group A included 100 patients who were treated with TACE followed by MWA after 2 weeks, group B included 100 patients who were treated with MWA alone, and group C included 100 patients who were treated with TACE alone. Patients were followed using triphasic computed tomography and blood tests including liver function tests, complete blood count, and  $\alpha$ -fetoprotein 1 month after therapy and then every 3 months up to 3 years. Evaluation was assessed using the mRECIST criteria. **Results:** All procedures were successfully completed without any moderate or severe adverse events. Only minor adverse events were reported and treated with no impact on the patients. Group A showed significant objective response rate (complete response + partial response) in comparison with the other groups ( $P < 0.001$ ). At 3 years, the overall survival (OS) was significantly higher in the group A than in group B and group C (62% versus 46% and 44%, respectively,  $P < 0.034$ ). **Conclusion:** Combined therapy (TACE + MWA) in HCC larger than 3 cm and smaller than 5 cm is better than TACE or MWA alone concerning the tumor response and OS.

## P203

### Transarterial Chemoembolization of HCC: Literature Data and Combined Early Experience of Two Hospital Centers from Morocco (80 Cases)

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**Objectives:** Hepatocellular carcinoma is the most common primary malignancy liver. Chemoembolization is a locoregional treatment technique in specific indications. The objective of our study is to detail the technical innovations of chemoembolization evaluating its contribution to the therapeutic management of hepatocellular carcinoma. **Methods:** This is a collaborative study of two centers (Radiology Department, International University Hospital Cheikh Khalifa, and Radiology Department, Mohamed V Military Hospital), including hepatocellular cancer patients who received chemoembolization as a part of locoregional treatment. Our study is spread over 4 years and 11 months, from January 9, 2015 to January 1, 2020, on about 80 cases. The data are collected retrospectively from the medical records of the patients included in our study. **Results:** The mean age was 60 years. Female to male ratio was 3.5. 70% of the patients were cirrhotic and one patient had portal hypertension. All patients received lipiodole chemoembolization. One patient had an anatomical variant and four patients had portal thrombosis. 65 patients were diagnosed with stage B BCLC and 15 stage A BCLC. The technique was selective (20 patients) and nonselective (60 patients). Twenty patients benefited from a CHE with microcatheter. Two patients received surgical resection after chemoembolization. 46% complete response, 29% partial response, and 25% progress. 52% of complications. 4 cases of recurrence. **Conclusion:** Chemoembolization has proven its place as a reference palliative treatment for patients in the intermediate stage of the disease. Its success is based on the right selection of patients. Advances in the interventional radiology aim to broaden indications for chemoembolization.

## P204

### Management of Hypoglycemia Secondary to Pancreatic Insulinoma with Transarterial Embolization: Insulinoma to Insulin-No-More

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**Educational Poster Background:** Insulinomas are the most common functional neuroendocrine tumors. They are typically small, hypervascular lesions arising in the pancreas. Patients classically present with a Whipple's triad of symptoms. Medical management of hypoglycemia resulting from tumoral insulin secretion is with diet, diazoxide, octeotride, corticosteroids, and