embolization, targets increase success rates and access to targets. We described our experience of radial access interventional oncology. **Methods:** We have performed over twenty cases of radial access vascular oncological procedures including Y90 treatment, bland liver embolization, TACE, drug-eluting bead (DEB)-TACE, and pelvic tumor embolization. **Results:** We have had no acute complications at the site of puncture or peripheral limb ischemia. We have had two procedure failures due to inability to cannulate the coeliac axis. However, in both of these cases, a second attempt via femoral approach was performed which also failed. One patient experienced radial artery spasm which we relived with local glyceryl trinitrate infiltration and intravenous sedation administration. **Conclusion:** Radial access vascular intervention is an innovative method of delivering intra-arterial therapy. In the oncology setting, it allows improved patient turnaround and reduced hospital stay. Successful hemostasis is also improved due to the relatively peripheral location of the target vessel and adjacent bone to allow adequate compression. We have experienced no significant complications and reduction in hospital stay. In addition, there has been excellent patient feedback focusing on the improved patient mobility postprocedure.

OC304

Combined Transarterial Chemoembolization and Percutaneous Ablation: A Single-Center Experience

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Background: Hepatocellular carcinoma (HCC) is a significant health concern in the Middle-East countries. Various management options are implemented to increase the survival rate in liver cancer patients with variable success rates. In this study, we aimed to evaluate the impact of combined transarterial chemoembolization (TACE) and percutaneous thermal ablation with either radiofrequency ablation (RFA) or microwave ablation (MWA) on the survival rate of patients with 2–5 cm HCC managed at King Faisal Specialist Hospital and Research Center, Jeddah, Saudi Arabia. **Methods:** We retrospectively evaluated 17 patients; 12 males (70%) and five females (30%), with a median age of 74 years. Ten patients (59%) had Child–Pugh A score, while seven (31%) had Child–Pugh B score. The HCC sizes ranged from 2 to 5 cm on the widest dimension. Six lesions (35%) were treated with lipiodol-TACE and 11 lesions (65%) were managed with drug-eluting bead-TACE. RFA was used in ablating 13 lesions (76%) and four lesions (24%) were treated with MWA. We followed those patients by computed tomography/magnetic resonance imaging for local recurrence in 3, 6, 12, and 24 months. The survival rate was assessed in 6, 12, and 24 months. **Results:** After successful combined TACE and imaging-guided percutaneous ablation, no recurrence was noted over 3 and 6 months. However, the recurrence rate was 28% and 50% at 12 and 24 months, respectively. Hundred percent survival rate was accomplished in 6 and 12 months, while we achieved 86% in 24 months, which is similar to a large-scale meta-analysis. However, seven patients have been lost during follow-up. **Conclusion:** A meta-analysis

of combined TACE and percutaneous ablation demonstrates the superiority of this method for decreasing local recurrence and increasing survival rate in patients with HCC measuring 3–5 cm. Our experience supports the recommendations of using combined embolic and ablative therapy in this group of patients.

OC305

Correlation between 30-Day Mortality and Albumin-Bilirubin and Platelet-Albumin-Bilirubin Score Grades Following Transarterial Embolization for Ruptured Hepatocellular Carcinoma: A Retrospective Single-Center Study

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Background: Although uncommon, hepatocellular carcinoma (HCC) presenting as acute rupture has a mortality rate reported to be high as 25%–75%. Management strategies include conservative treatment, surgical resection, as well as transarterial embolization (TAE). TAE can be an effective option to achieve hemodynamic stability in the acute phase though the overall 30-day mortality remains high. The recently developed Albumin-Bilirubin (ALBI) and Platelet-Albumin-Bilirubin (PALBI) grades have been shown to be accurate indicators of hepatic reserve in HCC patients. The purpose of our retrospective study was to assess the technical success and 30-day mortality of bland TAE for ruptured HCC. We also sought to correlate ALBI and PALBI grades with 30-day mortality rate. **Methods:** Data from electronic medical records and Radiology reporting system for all TAE procedures for patients diagnosed with ruptured HCC between 2012 and 2017 were retrospectively reviewed. We analyzed demographics, medical history, laboratory findings, and corresponding ALBI and PALBI grades, imaging findings, technical details, and clinical outcome. **Results:** A total of 24 TAE procedures were performed on 22 patients (16 males and 6 females) presenting with ruptured HCC between 2012 and 2017. Mean age at first presentation was 69.4 years (range: 24–103 years). Majority of the cases presented with abdominal pain and/or distention ($n = 22$) and were diagnosed on computed tomography ($n = 21$). Seven patients had solitary lesion, whereas 15 patients had either two ($n = 2$) or more ($n = 13$) lesions. Of the 22 patients, 20 patients had liver cirrhosis and 15 patients were known to have a diagnosis of HCC prior to rupture. The mean ruptured lesion size was 8.9 cm (range: 2.6–22 cm). Baseline ALBI grade at presentation was 2 ($n = 10$) and 3 ($n = 13$), while PALBI grade was calculated at 1 ($n = 22$) and 2 ($n = 1$). Gelfoam was the embolic agent in 12 (50%) and polyvinyl alcohol in 10 (42%) cases. Active contrast extravasation was noted in only 6 (25%) TAE procedures. All cases were technically successful (defined as satisfactory occlusion of artery feeding the ruptured tumor). Clinical success (defined as stabilization of hemoglobin levels 48 h post-TAE without need for re-intervention) was achieved in all but two interventions (one patient died within 48 h postintervention and another required a repeat embolization on the next day). 30-day mortality rate (27%) was calculated for 22 interventions (one patient lost to follow-up after being discharged on day 6). There was no correlation between 30-day mortality and ALBI grade ($P = 0.8$), PALBI grade ($P = 1$), and largest ruptured lesion diameter ($P = 0.7$). **Conclusion:** Despite

technically successful TAE for ruptured HCC, there is a high 30-day mortality. There was no correlation between 30-day mortality and ALBI and PALBI grades in our study.

OC306

Hematoma or Contrast Extravasation Posthepatic Tumor Ablation: Does It Require Intervention?

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Background: This study aimed to determine the incidence and management of clinically significant bleeding after radiofrequency ablation (RFA) of hepatic tumors and to evaluate the need for angiographic intervention in patients with active contrast extravasation on immediate postablation imaging. **Methods:** In this Institutional Review Board-approved, Health Insurance Portability and Accountability Act-compliant study, computed tomography (CT) and clinical data were retrospectively reviewed of consecutive patients (March 2006–September 2014) who underwent percutaneous image-guided ablation of hepatic tumors. Patients were evaluated for the need of care escalation and angiographic intervention for ablation-related bleeding within 30 days of the procedure. **Results:** A total of 339 patients (422 tumors) treated with percutaneous ablation were included. One hundred and nineteen patients required hospitalization following ablation with 74 (62.1%) and 10 (8.4%) patients having a perihepatic hematoma and active contrast extravasation/bleeding, respectively, on postablation imaging. Nine out of 119 patients (7.6%) required escalation of care to an Intensive Care Unit (ICU). The average hospital stay of patients with a perihepatic hematoma, bleeding, or lack of thereof on immediate postablation imaging was 2.5, 1.6, and 2 days, respectively ($P = 0.47$ and 0.28). Furthermore, 6/339 patients (1.7%) required angiography due to clinically significant bleeding with 1/339 (0.3%) death postprocedure (from progressive hypotension requiring ICU admission, angiographic intervention, and subsequent emergent laparotomy on postprocedure day 1 for delayed hemorrhage and disseminated intravascular coagulation). In comparison with a lack of hematoma, the presence of a perihepatic hematoma or active contrast extravasation on immediate postablation imaging did not increase the need for angiographic intervention for bleeding compared to patients without perihepatic hematoma on immediate imaging ($P = 0.14$ and 0.13 , respectively). **Conclusion:** Perihepatic hematoma and/or active contrast extravasation seen on immediate contrast-enhanced CT after hepatic tumor ablation does not necessitate escalation of care, increased hospital stay, or angiographic intervention and can be managed conservatively. Specifically, postablation contrast extravasation does not equate to unstable bleeding and need for immediate angiography.

OC307

Combined Treatment, Transarterial Embolization, and Microwave Ablation in Patients with Hepatocellular Carcinoma

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Background: This study aimed to compare the feasibility and benefit of combined therapy (transarterial embolization [TACE] + microwave ablation [MWA]) versus TACE or MWA alone in the treatment of hepatocellular carcinoma (HCC) >3 and <5 cm. **Methods:** During 3 years, 150 consecutive patients with HCC >3 and <5 cm were divided into three groups: Group 1: fifty HCC patients who underwent TACE, Group 2: fifty HCC patients who underwent MWA, and Group 3: fifty HCC patients who received combined therapy with TACE followed by MWA after 1 month. The mean age was 57 years, 94 (62.7%) patients were males. Follow-up with triphasic computed tomography (CT) was performed after 1 month and then every 3 months for 1 year. **Results:** After 1 month, complete response was detected in 27 cases (54%) in Group 1, 22 cases (44%) in Group 2, and 50 cases (100%) in Group 3; partial response in 8 cases (16%) in Group 1 and 5 cases (10%) in Group 2; and progressive disease in 15 cases (30%) in Group 1 and 23 cases (46%) in Group 2. Recurrence rate after 1 year was 38 cases (72%) in Group 1, 40 cases (80%) in Group 2, and 9 cases (18%) in Group 3. Disease-free survival rate at 12 months was 12 cases (24%) in Group 1, 10 cases (20%) in Group 2, and 41 cases (82%) in Group 3. **Conclusion:** Combined therapy (TACE + MWA) in HCC >3 cm and <5 cm is better than TACE or MWA alone concerning the recurrence rate and disease-free survival rate.

OC308

The Impact of Implementation of Electronic Medical Record on the Practice

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Background: The use of information technology (IT) had measurable impact on many aspects of the practice of medicine and radiology. The introduction of electronic medical records (EMRs) has improved work efficiency by standardization of data collection and protocols, reducing the chances for medical errors, and facilitated long-term data maintenance. Implementation of EMR in interventional radiology represents a unique challenge, where both clinical and radiology information has to be integrated. **Methods:** This poster discusses the impact of introducing a new EMR system on workflow in vascular interventional radiology (VIR) and briefly discusses the preparation for launching EMR system, obstacles, advantages, and disadvantages based on an electronic survey of employees in the VIR unit at King Abdulaziz Medical City and King Abdullah Specialized Children Hospital. **Results:** Launching the EMR system was preceded by 6-month period of a hospital-wide training, introducing the new EMR system to all health-care providers and associates. During this period, all hospital units were equipped with new computers, iPads, and special printers compatible with the new system. Integration of the Radiology Information System and new EMR was carefully conducted and monitored by the radiology IT team and new pre- and post-procedure order sets for every VIR procedure were uploaded to the system. Intensive training of staff and “super users” was done in preparation for the actual launch of the system. On-call clinical and IT teams along with hotlines were available on the day of “Go Live” for troubleshooting. The electronic survey of the VIR team on the use of EMR had a 66%