

(odds ratio = 4). **Conclusion:** Due to its excellent Sp and PPV, elastography is an efficient method in detecting and characterizing the suspicious lesions to improve the efficiency.

#### OR4.4

### Angiomyelolipoma Size Reduction after Selective Renal Arterial Embolization Using Mixture of Ethanol and Ethiodize Oil Solution: A Retrospective Study in Single-Center Experience

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**Objectives:** The purpose of this study was to evaluate size of renal angiomyelolipoma (AML) after selective renal arterial embolization. The mixture of alcohol and ethiodize oil solution was used as an embolic material. **Methods:** Nine patients with renal AML were treated with selective renal arterial embolization between July 2009 and November 2018. The mixture of alcohol and ethiodize oil solution in a ratio of 3:1 was used as an embolic material. Medical records were reviewed and analyzed. The follow-up computerized tomography scan images were used to evaluate the clinical success and size reduction. **Results:** The mean size of AML before treatment was 11.1 cm (range, 6.8–20.2). The mean size of AML after treatment was 7.9 cm (range, 3.6–13.2). Three (33.3%) patients had bilateral and 6 (66.7%) had unilateral AML. All of patients who had bilateral AML had tuberous sclerosis complex. Four (44.4%) patients presented with bleeding AML and required emergency embolization. Most of patients (77.8%) need multiple sessions of embolization. No bleeding or tumor growth was observed during follow-up period. Five patients (55.6%) had postembolization symptoms after embolization. None of the patients had major complication. **Conclusion:** The mixture of alcohol and ethiodize oil solution was safe and efficient in the treatment of renal AML.

#### OR4.5

### The Role of Minimally Invasive Treatment Methods in Patients with Bladder Neoplasms with Macrohematuria

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**Objectives:** Often, with prolonged and severe hematuria from the lower urinary tract, urological surgeons have to ligate the internal iliac arteries by the open method, under general anesthesia, while a number of patients have somatic diseases, weakened, and high operational risk. Minimally invasive surgery chemoembolization for bladder cancer can be an alternative in the complex treatment of this terrible disease. **Methods:** In the “National Scientific Center of Oncology and Transplantology” from 2016 to June 2019, 26 patients with bladder cancer underwent “chemoembolization of the lower cystic arteries (arteria vesicalis inferior).” Chemodrug for this procedure was adriamycin at a dosage of 50 mg or cisplatin 50 mg. HepaSphere-

loaded microspheres with dimensions of 300–500 µm were used as a source of chemotherapy drug transportation. Eighteen of 26 patients had bladder cancer T2N0M0 stage, 2 T3NxM0 stages, and 6 T1-M NoM0; all histologically verified transitional cell cancer G2–3. Three of them had an expansion of the upper urinary tract on the one side and one on both sides. Twenty-four patients reported episodic bleeding in the form of blood clots in the urine, while two had total micromaturia. Embolization of the vesicalis arteries was performed under local anesthesia by access according to the Seldinger under X-ray control. Patients were discharged on the 3<sup>rd</sup> day after surgery. Twenty-six patients with bladder cancer were given two courses of chemoembolization with an interval of 1 month. **Results:** The results of the treatment were evaluated according to the general condition of the patients, complaints, the absence of hematuria, a decrease in the size of the tumor, and the positive dynamics of the blood test indicators. In the first 2 days, three patients experienced pain syndrome, which passed after the use of nonnarcotic analgesics. Hyperthermia, local pathological changes in the introduction of a vascular catheter into the femoral artery, was not observed. After 2 months at the control examination, patients had no episodes of gross hematuria, and the blood tests improved. According to magnetic resonance imaging, computed tomography, ultrasound, and cystoscopy, tumor size decreased on average by >25% after two courses of chemoembolization. Six patients 3 months after the first chemoembolization surgical interventions were performed in the volume of Transurethral resection of the prostate – 4, open resection – 1, and cystectomy – 1. The histology of the removed tumor confirmed therapeutic necrosis of the tumor tissue. Three patients with advanced disease were referred for further chemoradiation treatment and three with the initial stage of the process continue to be observed with the recommendation of local chemotherapy. **Conclusion:** Thus, chemoembolization is a minimally invasive, but effective method of treatment for bleeding from the bladder. It needs widespread use among patients when comorbidities do not allow the implementation of bulk routine treatment methods. A small number of patients and a short follow-up period do not give grounds for definitive conclusions in the duration of treatment and the number of chemoembolizations sessions in bladder cancer.

#### OR4.6

### An Experimental Study of Early-Degradable Fish-Derived Spherical Gelatin Microparticles as an Embolic Agent in a Rabbit Renal Model

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**Objectives:** To compare the degradation periods of different molecular weight (MW) fish-derived spherical gelatin microparticles (GMPs) via transauricular arterial access in a rabbit model. **Methods:** Twenty-four rabbits, weighing 2.7–3.8 kg, were used in the study. Renal angiography was performed with a microcatheter via transauricular approach. Segmental renal arteries were embolized using two different MW spherical GMPs (155–350 µm; low MW: 5–15 kDa; high MW: 15–30 kDa). In each group, rabbits were sacrificed immediately after

embolization and were sacrificed after follow-up angiogram on day 2 and 21 of embolization, respectively. Degradation of the GMP and pathological changes were evaluated. For *in vitro* study, each GMP was mixed with saline and placed in a 37°C thermostat. Macroscopic and microscopic morphological changes of GMPs were compared for 2 weeks. **Results:** Both high and low MW spherical GMPs showed effective embolic results. On 2-day follow-up angiography, vessels were slightly recanalized to a similar degree. However, in low MW group, embolized arteries were reperfused to a greater extent on day 21, compared to the high MW GMP. Histologically, perivascular inflammation and fibrosis were more frequently identified in high MW group. In *in vitro* study, low MW GMP lost the spherical shape and degraded on day 5 and was invisible on microscopy, whereas high MW GMP was only partially degraded after 2 weeks. **Conclusion:** Low MW fish-derived spherical GMP revealed short-term embolic effect and provided early recanalization of the occluded arteries with low inflammatory response.

#### OR4.7

### Stimulant Antibiotic-Impregnated Beads for the Treatment of Diabetic Foot Infection and Vascular Graft Infection

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**Objectives:** Limited evidence has been found on the effectiveness of Stimulan antibiotic beads for the treatment of diabetic foot ulcer or vascular graft infection, and it is still yet to be explored. Our goal was to review the healing effect, the rate of infection eradication, the graft preservation, and the length of postoperative hospital stay in patients who acquired prosthetic graft infection and diabetic foot infection and hence compare the results of both. **Methods:** This was a retrospective review of patients implanted with Stimulan antibiotic beads at Northampton General Hospital in England from 2017 to 2019. A cohort of 22 patients aged between 45 and 92 was used in this study to compare the postoperative outcome of the wound and the duration of healing and follow-up. **Results:** Nineteen patients with diabetic foot infection and three patients with local vascular graft sepsis were treated with Stimulan antibiotic beads insertion. Grafts such as aorto-bifemoral bypass, femoral-to-femoral crossover, and femoral distal popliteal bypass were included. The average length of hospital stay for the patients with Stimulan beads insertion was 8 days. For healing effect, 82% of the patients (18 in 22 patients) had healed wounds within the first follow-up appointment, two patients had a partial healing effect which required further follow-up appointments, and two patients showed no signs of healing and needed re-admission. 9% of the main study group had a new onset of infection elsewhere. **Conclusion:** This study concluded the success of Stimulan antibiotic beads being used as the treatment of diabetic foot infection and local vascular graft sepsis, especially in patients with major vascular reconstruction. Stimulan antibiotic beads should be considered as one of the effective managements in treating vascular graft infection and diabetic foot infection.

#### OR4.8

### Survival Benefit of Aggressive Treatment Approaches Incorporating Yttrium-90 Radioembolization for Late-Stage Hepatocellular Carcinoma

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**Objectives:** To evaluate treatment allocation and outcomes for Barcelona Clinic Liver Cancer (BCLC) stage C and D hepatocellular carcinoma (HCC) following our institution's multidisciplinary approach utilizing yttrium-90 radioembolization (Y90). **Methods:** All new HCC diagnoses discussed at our multidisciplinary tumor board, 2010–2013, were included. Charts were reviewed for demographics, tumor characteristics, laboratory values, treatment, and outcomes on an intention-to-treat basis (resection, transplant, ablation, Y90, transarterial chemoembolization, sorafenib, palliative therapy). Patients received a BCLC stage at initial treatment. Survival analyses were performed from first treatment date until death, loss to follow-up, or end of capture period (April 2, 2019). **Results:** Over 4 years, 321 treatment-naïve patients with HCC were enrolled, of which 33% were BCLC C and 15% were BCLC D. Between these two stages, the median age was 61 years with predominance of hepatitis C-associated disease (39%, 60). Median follow-up and median overall survival (mOS) were 13 and 15 months (95% confidence interval [CI] 18–88), respectively. Table 1 describes treatment groups and BCLC-discordance by stage. Y90 comprised 65% and 50% of BCLC-discordant treatments in BCLC C and D patients, respectively. BCLC-discordant patients had longer mOS in BCLC C (hazard ratio [HR] 0.27, 95% CI: 0.12–0.60, 25 vs. 4 months,  $P = 0.001$ ) and D (HR 0.16, 95% CI: 0.06–0.39, 47 vs. 2 months,  $P < 0.001$ ) groups. mOS of BCLC C and D patients bridged to curative therapy was 64 (43–81) and 72 (58–85) months, respectively. Actual mOS was longer in Y90 (43 vs. 32 months,  $P < 0.001$ ) and transplant (61 vs. 16 months,  $P < 0.001$ ) groups compared to expected mOS by BCLC stage. **Conclusion:** This analysis of a large cohort of untreated HCC demonstrates significant survival benefit in BCLC C and D patients when incorporating Y90 in the treatment algorithm, supporting more aggressive locoregional therapies that limit disease progression.

#### OR4.9

### Prostatic Artery Embolization for the Treatment of Chronic Bacterial Prostatitis: An Early Experience in Four Cases with 1-Year Follow-Up

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**Objectives:** Chronic bacterial prostatitis (CBP) is a common health problem affecting about 10% of males, characterized by recurrent episodes of urinary tract infections with devastating