

complications, and the latter two were associated with decreased overall survival ($P = 0.036$ and $P = 0.051$, respectively). None of the variables predict local recurrence. The recurrence-free, cancer-specific, and overall survival at 3 years was 66.6%, 100%, and 93.4%, respectively. **Conclusion:** Tumor biopsy, tumor location, nearness to collecting system, and renal sinus involvement were the predictors of outcomes of PCA of RCC.

OR4.1

Safety and Efficacy of Extensive Vertebroplasty (up to 6 Levels) for the Management of Painful Thoracolumbar Metastases

Benjamin Moulin, Frederic Deschamps, Lambros Tselikas, Thierry de Baere

*Gustave Roussy, Villejuif, France.
E-mail: b.moulin00@gmail.com*

Objectives: To assess the safety and efficacy of extensive vertebroplasty (EV) for the management of painful, extensive thoracolumbar metastases. **Methods:** In this single-center retrospective study, we reviewed 50 consecutive patients treated using EV from 2015 to 2019 (at least six levels treated in a single session), for pain palliation, or need for decrease painkiller consumption. The primary endpoint was safety of the procedure, with report of complications according to the Clavien–Dindo classification and including clinically relevant cement pulmonary embolism. The secondary endpoints were back pain-related numeric rating scale (NRS) and daily opioid consumption comparison between preoperative and 4 weeks postoperative evaluation and occurrence of skeletal relative events (SREs). **Results:** A total of 397 vertebrae were treated during 50 EV sessions (mean 7.9 ± 1.5 levels by session). The mean procedure duration was 162 ± 35 min, the mean postoperative hospitalization duration was 1.6 ± 0.9 days, and the mean follow-up duration was 401 ± 297 days. Seven complications were reported, without major complication (grade 4 or 5) according to the Clavien–Dindo classification. One patient had a symptomatic pulmonary cement embolism. There was a significant difference between pre- and postprocedure mean NRS score (5.0 ± 1.8 vs. 1.7 ± 1.4 , $P < 0.0001$), with a mean score decrease of 3.3 points (62%), and between pre- and postprocedure mean opioid use (76 ± 42 mg/24 h vs. 45 ± 37 mg/24 h, $P = 0.0003$), with a mean decrease of 30 mg/24 h (33%). SRE occurred on seven patients during the follow-up. **Conclusion:** EV is safe and effective for the management of painful extensive spinal metastases.

OR4.2

Bariatric Artery Embolization for Treatment of Obesity; Is It Safe to Embolize All Fundal Blood Supply? An Egyptian Experience in 12 Cases

Rana Tarek Mohamed Khafagy, Mahmoud Mostafa, Mark Michael, Hend Gamal, Karim A. Abdel Tawab

*Ain Shams University Hospitals, Cairo, Egypt.
E-mail: Ranatarek@hotmail.com*

Objectives: Left gastric artery (LGA) embolization to decrease appetite by the closure of blood supply to the fundal glands

secreting “ghrelin” (Hunger hormone), also known as bariatric artery embolization (BAE), has experienced increased acceptance worldwide. Fundal dual blood supply from the LGA and right gastroepiploic artery (RGEA) is rather common. Our study aims to assess the safety and preliminary weight loss in patients with embolized dual fundal supply. **Methods:** Since 2016, 45 obese cases with mean body mass index (BMI, 36.7) presented to us for BAE. LGA and RGEA were superselectively catheterized in all patients revealing dual fundal supply in 12 patients and were embolized with 300–500 μ spherical particles with complete cessation of fundal blood supply as angiographic endpoint. Close monitoring of the complications was done. Weight was measured at 1, 3, and 6 months. **Results:** In 12 patients, no major complications were occurred. Vomiting and epigastric pain were seen in various degrees in all patients; two patients developed mild self-limiting coffee ground hematemesis for 2 days treated conservatively. Patients reported marked subjective decrease in appetite in the 1st month with slight recovery of appetite during follow-up. BMI decreased from 36.4 to 31.7, 30.5, and 30.2 at 1, 3, and 6 months, respectively. **Conclusion:** In our small series, LGA and RGEA embolization has shown to be a safe technique in controlling appetite, leading to short-term weight loss. With its minimally invasive nature, it can become a promising procedure in the treatment of overweight/obesity.

OR4.3

Value of Real-Time Elastography-Targeted Biopsy for Prostate Cancer Detection in Men: A Prospective Study of 194 Patients

Chaffa Aimeur, Mohammed Abdelmadjid Adlene Habba, Abdellatif Massif, Mounir Tabouche¹, Amine Habouchi¹

*Department of Medical Imaging, University Hospital, Mustapha Bacha,
¹Department of Medical Imaging, University Hospital, Bab El Oued,
Algiers, Algeria.
E-mail: chaffa.aimeur@gmail.com*

Objectives: The main objective of this study is to define the impact of the elastography ultrasound in the guiding of prostatic biopsies in Algerian patients, by studying their efficiency in comparison to the results of published series. **Methods:** In this prospective study, 194 patients with clinical and biological suspicion of prostate cancer underwent color Doppler and elastography-guided biopsies. The mean age of our patients was 69.9 ± 8.7 years with the extremities between 43 and 87 years, the average of total prostate-specific antigen was 19.8 ± 1.8 ng/ml, and the digital rectal examination was pathological in 40.2% of patients. These patients underwent targeted biopsies at suspicious areas in color Doppler imaging and elastography, associated with 12-core randomized biopsies, and the histopathological results were correlated with imaging findings. **Results:** Ninety-eight patients (50.52%) were diagnosed as adenocarcinoma, among which 25 (27.4%) had a score >7 . An elastographic anomaly was found among 88 patients (45.36%), 72 of them (81.8%) were cancerous, while 26 cancer cases (26.53%) had no elastographic rendition. The performances of elastography after result analysis came as follows: sensitivity: 73.2%, specificity (Sp): 82.83%, positive predictive value (PPV): 80.68%, negative predictive value: 75.93%. A strong relationship between the positive results of elastography and the high histological grade was found

(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

Nakarin Inmutto, Tanop Srisuwan, Tanate Kattipatanapong, Lalita Huntrakul, Nattapong Nimitrungtaewee

Chiang Mai University, Chiang Mai, Thailand.

E-mail: nakarin.i@cmu.ac.th

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 tuberosus 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

Kaster Baizhanuly

National Research Oncology Center, Nur-Sultan, Kazakhstan.

E-mail: dr.kaster84@gmail.com

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 3rd 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

Jin Hyeok Kim, Ung Bae Jeon, Chang Won Kim¹, Chang Ho Jeon¹, Hyun Jung Lee²

Departments of Radiology and ²Pathology, Pusan National University Yangsan Hospital, Yangsan, ¹Department of Radiology, Pusan National University Hospital, Busan, South Korea.

E-mail: romario11@hananet.net

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