P437**Interventional Radiology Awareness Among Final-Year Medical Students in Riyadh: 5 University-Based Cross-Sectional Study****Abdullah Bader Abohmed***National Guard Health Affairs, Riyadh, Saudi Arabia.**E-mail: AbdullahAbohmed@Gmail.com*

Background: Interventional Radiology was born in 1964 thanks to the efforts of Charles Dotter. Today, Interventional radiology is an ever-expanding field of medicine that incorporates a wide array of minimally-invasive, image-guided procedures with both diagnostic and therapeutic properties. However, there exists a glaring ambiguity about the role of the Interventional Radiologist. This, in part, is due to the overlap between Interventional radiology and other specialties for procedures and administrative tasks. The confusion that this creates may sway medical students away from the field of Interventional radiology and could directly impact both recruitment of young exciting prospects, and the shortage of Interventional radiology practitioners. There is little to suggest from the medical literature about the knowledge of Interventional radiology among final-year medical students. However, there are a handful of studies, all of which conclude that the majority of final-year students lack even the basic knowledge of Interventional Radiology. **Method(s):** We will be running a cross-sectional, self-administered questionnaire at 5 university-based medical schools in the Riyadh region targeting all final-year medical students. 285 potential participants have been recognized. **Result(s):** Results will be analyzed soon. **Conclusion(s):** We believe that IR will become a force to reckon with in the near future. The minimally-invasive nature of IR procedures has proven to be a safe alternative to conventional surgery. We feel with this study we can advance IR knowledge amongst pre-graduate medical students and ultimately enhance IR recruitment, especially in the Gulf region.

P438**The Utility of Two-Dimensional Perfusion Angiography in Critical Limb Ischemia: A Single Center Experience****Abdulrahman Alvi, Zahra Assiri, Asma Bin Habjar, Muhammad Al Moaiqil***King Abdul Aziz Medical City, Riyadh, Saudi Arabia.**E-mail: arjalvi@gmail.com*

Background: CLI is a combination of both decreased inflow to the foot (macrocirculation) and volume flow through the capillary bed (microcirculation) resulting in diminished oxygen concentration in the tissues. The goal of endovascular therapy in CLI is to recanalise the vessels to the foot, obtain better tissue perfusion, and to accelerate wound healing. 2D-PA is a new imaging algorithm to measure volume flow in the whole foot both in the macrocirculation and microcirculation utilizing data from plain old digital subtraction angiography. **Method(s):** A retrospective single-center study review of 21 patients from February, 2017 to August 2018 (mean age 84 ± 42 years; 17 men, 8 women) with CLI who underwent lower limb digital subtraction angiography (DSA) A standardized contrast administration protocol was applied during DSA using a 2D

perfusion-enabled image intensifier. Representative hindfoot and forefoot regions of interest were analyzed, and representative numeric density values [time to peak (TTP), mean transit time (MTT) and area under the (time-density) curve (AUC)] were calculated using 2D perfusion-enabled angiographic software to assess foot perfusion. **Result(s):** The numeric density values (mean change in TTP (0.75 s), MTT (0.85 s) and AUC (1835.53)) were compared before and after angioplasty and by level of treatment and these parameters were correlated with disease severity (Fontaine Classification (III=8; IV=16)). **Conclusion(s):** In our initial experience, 2D-PA is a useful tool in critical limb ischemia evaluation and treatment by providing objective measurements of microvascular perfusion during and following endovascular procedures. This helps determining both the end point and outcome of revascularisation.

P439**Sharp Recanalization of Chronic Venous Occlusions Utilizing Outback Re-Entry Device****Ali Alsaadi, Mohammad Arabi, Omar Bashir, Shahbaz Ahmed Qazi, Mohammed Al Moaiqel***King Abdulaziz Medical City, Ministry of National Guard, Riyadh, Saudi Arabia.**E-mail: Radiology1@hotmail.com*

Background: Chronic total venous occlusion of superior or inferior vena cava is increasingly encountered in daily practice. Several endovascular techniques including thrombolysis, percutaneous transluminal angioplasty (PTA), bare and covered metallic stents have been implemented to restore venous patency. Patients who fail standard recanalization techniques may require sharp recanalization procedures to reconstruct the chronically occluded segments. Several tools have been used to cross the occluded segments such as TIPS needles, trans septal needle, direct trans mediastinal needle puncture and radiofrequency wire. The use of re-entry devices in crossing chronic venous occlusions is seldom reported in the literature. **Method(s):** This educational poster will present few illustrative cases of the use of Outback re-entry device in recanalization of chronically occluded IVC and SVC with discussion of technical considerations. **Result(s):** This educational poster will present few illustrative cases of the use of Outback re-entry device in recanalization of chronically occluded IVC and SVC with discussion of technical considerations. **Conclusion(s):** Sharp recanalization of chronic venous occlusions utilizing Outback re-entry device is a safe and reliable way to cross the central occlusion with good success rate.

P440**Unusual Cases of Gastrointestinal Hemorrhage Managed in Interventional Radiology****Sultan R. Alharbi***King Saud University, Riyadh, Saudi Arabia.**E-mail: drsultan000@gmail.com*

Background: in this poster we report and illustrate 2 cases of very rare GI bleeding. one upper GI bleeding due to Esophago-mediastinal fistula secondary to mediastinal TB complicated by Mediastinal bronchial artery aneurysms which is treated by coils embolization. second case of lower GI bleeding due to secondary arterio-enteric

fistula post Aorto-bi-femoral graft presented with life threatening bleeding managed by endovascular stenting by covered stent.

P441

HERO® Graft Placement: Getting Rid of the Catheter in Patients with Central Stenosis

**Yasir Suliman, Asim Khwaja¹,
Mohamed Al Marzooqi¹, Hefsa Alshamsi²,
Moatassem Bukhari, Amin Eltahir³,
Emad Khater⁴, Shahabaz Patil⁴**

*Departments of Surgery and ⁴Radiology, Mafraq Hospital, ⁴Department of Radiology, Mafraq Hospital, Departments of ¹Radiology, ²Medicine and ³Surgery, Sheikh Khalifa Medical City, Abu Dhabi, UAE.
E-mail: ysuliman@seha.ae*

Background: Central venous stenosis and occlusion are a major cause of vascular access dysfunction and failure. The HeRO® Graft provides access for patients with central venous occlusion who are catheter-dependent or have failing fistulae or grafts by providing reliable venous outflow directly into the right atrium [Figure 1c and d]. Moreover, when combined with the use of early cannulation grafts it has the advantage of immediate access directly after the procedure. We reviewed our experience using the strategy of combining the use of HeRO graft with early cannulation graft. **Method(s):** Patients with suspected central venous occlusion or stenosis who are catheter-dependent or have failing fistulae or grafts were discussed in multi-disciplinary meetings. Only patients with central venous stenosis or occlusion confirmed by CT or conventional venogram were included [Figure 1a and b]. Patients with active infection, brachial artery diameter less than 3 mm, hypercoagulable state and ejection fraction less than 20 were excluded. **Result(s):** Five hemodialysis patients with history of multiple failed arteriovenous access and confirmed central venous occlusion were recruited. All patients underwent successful placement of HeRO graft in combination with early cannulation graft [Figure 1c and d]. All grafts were accessed within 48 hours. Median follow up was 219 days (range 32 -240 days). No adverse events were noted during the follow up period. HeRO graft thrombosis occurred in three patients, requiring re-intervention using percutaneous thrombectomy, primary patency 40%. All five grafts remain patent and functional, secondary patency 100%. **Conclusion(s):** HeRO® graft placement can provide vascular access in hemodialysis patients with central venous occlusion who would otherwise remain catheter dependent. Combining the use of early cannulation graft with HeRO graft placement can further reduce catheter dependence and does not appear to impact HeRO graft secondary patency.

P442

Drug-Coated Balloon use in Dysfunctional Arterio-Venous Access Treatment the Effect of Consecutive Treatments in Target Lesion Primary Patency

**Michail Theofanis, Ioannis Spyridonidis,
Panagiotis Kitrou, Panagiotis Papadimitos,
Konstantinos Katsanos,
Dimitrios Karnabatidis**

*Department of Diagnostic and Interventional Radiology, Patras University Hospital, Patras, Greece.
E-mail: mixalistheofanis@hotmail.com*

Background: This was a retrospective longitudinal analysis investigating the safety and effectiveness of consecutive treatments with the Lutonix Drug-Coated Balloons (DCB) in dysfunctional arteriovenous access; both fistulae (AVF) and grafts (AVG). **Method(s):** From January 2015 to December 2017 (3 years), 339 Lutonix DCB were used in 257 procedures of 165 patients with a dysfunctional AVF or AVG. Of these patients, 33 had ≥ 2 procedures, adequate data and were included in the analysis. In these patients, 112 procedures were performed (22 treated twice, 4 patients 3 times, 7 patients 4 times, 2 patients 5 times and 3 patients 6 times) using 133 devices. Mean lesion follow-up was 247 days (min. 20 days – max. 908 days). Mean balloon diameter was 8.13 mm (3-12 mm) and length 63.16 mm (40-150 mm). Primary outcome measure safety, defined as freedom from any serious adverse event(s) involving the AV access circuit through 30 days for all procedures and target lesion primary patency (TLPP). Secondary outcome measures included investigation of independent factors that may influence outcomes. **Result(s):** Safety was reached in all cases (112/112 procedures, 100%). Median TLPP was 227 days for the first intervention and 280 days for the second consecutive intervention [$p=0.37$; Hazard ratio: 1.271 (CI: 0.75-2.16)]. **Conclusion(s):** Consecutive use of the Lutonix DCB for the treatment of dysfunctional dialysis access was safe. There was no significant difference in TLPP between the 1st and 2nd procedure, although a numerical improvement was observed. Results suggest consistency in TLPP regardless of the aging arterio-venous access.

P443

The Use of Supera Stents in Maintaining Dysfunctional Dialysis Arterioveonus Fistulas: A Single Center Experience

**Aeed Saad Alaklabi, Hasan Alshehri¹,
Ali Rajeh, Omar Bashir, Refat Salman,
Mohamad Arabi**

*King Abdulaziz Medical City, ¹Prince Sultan Military Medical City, Riyadh, Saudi Arabia.
E-mail: asadern@gmail.com*

Background: Dialysis access failure is a major cause of mortality and morbidity among dialysis patients. Preservation of access is critical to maintaining hemodialysis, avoiding uremia, and managing the complications of kidney failure. The usual IR approach to thrombosed or stenosed arteriovenous fistula (AVF) is a combination of thrombectomy and balloon angioplasty of the underlying lesion. Stents and stent grafts appear to be an ideal method to treat thrombosis or neointimal hyperplastic stenosis. These safe endovascular device stents improving blood flow through the fistula or graft as they oppose elastic recoil and subsequent thrombosis. Stent placement is minimally invasive procedure, performed by IR doctors utilizing ultrasound and fluoroscopic guidance with rare complication and less stay in the hospital. The main indications of these procedure are early recurrent thrombosis, recoil stenosis and pseudoaneurysm of AVF. **Method(s):** This is a retrospective study of 11 consecutive patients (6 females) with mean age of 56 years, who underwent