

position, and were subjected to DRE. TRUS with a color Doppler for the detection of prostatic lesion using G. E. LOGIQ 5 PRO ultrasound color Doppler machine (with a TRUS probe [6–10 MHz]). Later, a TRUS-guided biopsy was performed using an 18G biopsy gun to confirm the radiological diagnosis. **Results:** Data were analyzed using Statistical Package for the Social Sciences (SPSS) version 21.0 (IBM, New York, USA). A Chi-square test and a “*t*” test of independent samples were used to compare the data.  $P < 0.05$  indicated a significant association. Diagnostic efficacy was expressed in terms of sensitivity, specificity, positive predictive value, negative predictive value (NPV), and accuracy. The age of patients ranged from 51 to 77 years. The mean age of patients was  $63.80 \pm 6.76$  years. A majority of the patients were <65 years of age (65%); on DRE, a total of 17 (42.5%) patients had induration while 23 (57.5%) had nodular lesions. PSA values ranged from 5.8 to 9.8 ng/ml. Exactly half of the patients had PSA <8 ng/ml; histopathologically, 13 (32.5%) cases were malignant. On TRUS evaluation, a total of 10 (25%) cases were malignant. TRUS findings combined with color Doppler vascularity findings diagnosed malignancy in 15 (37.5%) cases. **Conclusion:** The findings of the present study showed that TRUS with color Doppler flowmetry can play an important role in the detection of prostate malignancy, with high sensitivity as well as specificity. The high NPV, as observed in the present study, could avoid unnecessary diagnostic invasive intervention. In the present study, TRUS diagnosis established 30 (75%) cases as benign and 10 (25%) cases as malignant, showing the rate of cancer detection to be close to that diagnosed through histopathology. Among different TRUS characteristics, irregular shape, heterogeneous echotexture, loss of differentiation between the peripheral and internal zones, increased mean prostate weight, and capsular invasion were found to be significantly associated with malignancy.

### P301

#### Challenges in Carotid Artery Stenting

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**Background:** Carotid artery disease is a significant cause of acute ischemic stroke and transient ischemic stroke. Significant carotid artery diseases are treated by carotid endarterectomy (CEA) or carotid artery stenting (CAS). **Methods:** We are presenting some challenging situations where patients with significant carotid artery diseases are not suitable/willing for surgery (CEA) and the anatomy too is challenging for CAS. Also presenting some seemingly straight looking CAS but pose serious intraprocedural challenges. **Results:** We could deal with the challenging situations with innovation and persistence. **Conclusion:** Understanding the nature of the carotid plaque is of paramount importance in doing a successful CAS. Imaging of the entire access is a must to carry out a successful CAS in most situations.

### P302

#### Assessing Readiness for Acute Stroke Mechanical Thrombectomy Service

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**Background:** Stroke is a leading cause of mortality and serious long-term disability. Recently published trials prove the superiority of endovascular mechanical thrombectomy (EMT) over best medical therapy, for selected patients with acute ischemic stroke. There is almost consensus that for optimum outcomes, onset-to-groin puncture time should be <6 h. The aim of our work is to assess our readiness to implement EMT, by evaluating aspects of delay in dealing with such time-critical group of patients. **Methods:** A prospective random sample of 20 patients presenting to our emergency department with acute stroke was selected. Total elapsed time from symptoms onset until release of emergency radiology report was measured and analyzed into five subcategories: from symptoms onset until decision to seek medical care (termed “awareness”); trip from home to hospital (“ambulance”); time spent in emergency room until arrival to radiology (“ER”); waiting time in radiology reception (“wait”); time until emergency radiology report release (“report”). **Results:** 2/20 (10%) were wake-up strokes, the other 18 cases had median time from onset to radiological diagnosis by CT, of 4:59:00. Previously described delay intervals are summarized in ascending order in this table. Median time (hours) (“ambulance” 02:17:30; “awareness”01:07:30; “ER”-00:55:00; “report”00:23:00; “wait”00:19:00; total-05:02:00). **Conclusion:** Assuming the interventionist reaches the hospital within 1 h, half of thrombectomy candidates can be started within the 6-h interval. There is an urgent need for mass media campaigns raising awareness regarding early manifestations of stroke. Emergency physicians should be educated about EMT, as most of them only knew about medical thrombolysis, whose window is only 4.5 h. Such unawareness can lead to slow management of patients presented beyond 4.5 h. A porter must be dedicated only for the transport of acute stroke patients. Radiology reception staff should be educated about the emergent nature of acute stroke-related scans and prioritize accordingly.

### P401

#### Efficacy of Computer-Aided Detection of Thyroid Nodule in Reduction of Unnecessary Fine Needle Aspiration Cytologies Along with Role of Radiofrequency Ablation in Thyroid Nodule Treatment

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**Background:** AmCAD is a window-based computer-aided detection (CAD) device intended to assist the medical professionals for categorization of thyroid nodules through ultrasound. CAD is an objective way to determine which thyroid nodules need to have fine needle aspiration cytology (FNAC) and helping to reduce FNAC frequency in the thyroid. It saves workload, and there is no interobserver variation. Nodular thyroid disease is very frequent in clinical practice in Pakistan and worldwide. It is associated with increased risk of thyroid cancer and hyperfunction. In this paper, we propose a novel method for CAD of thyroid nodules in ultrasound (US) images followed by treatment if possible by Radiofrequency ablation (RFA). This novel method was experimentally evaluated using US images acquired from 24 patients. The results show that the proposed method achieves more accurate delineation of the

thyroid nodules in the US images and faster convergence than other relevant methods. **Methods:** The purpose of this article is to introduce application and utilization of the CAD system in thyroid ultrasonography. After getting clear images of thyroid nodule along with longitudinal and traverse measurements, four parameters are calculated and displayed by the computer system automatically, which include microcalcifications, hypoechoic lesion, heterogeneity, and indistinct margin. **Results:** The results are displayed automatically with pointers in the semilunar figures. The necessity of FNAC depends on the size and numbers of positive findings along with percentage risk of malignancy. **Conclusion:** This CAD system is objective, reproducible, and easy to use. It can be easy to determine the necessity for FNAC, but what we must keep in mind is that this method can reduce the necessity of FNAC, not replace FNAC for the diagnosis of thyroid cancer. RFA of thyroid nodule is minimally invasive very good tool as mode of treatment.

#### P402

### Reduce Confusion! Using Combined Contrast Ultrasound and Fusion Technique During Radiofrequency Ablation of Liver Space-occupying Lesions

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**Background:** Purpose of this prospective study conducted in small oncology hospital is to highlight using either contrast-enhanced ultrasound (CEUS) with or without computed tomography (CT) fusion imaging to treat liver lesions well seen on positron emission tomography (PET)/CT or magnetic resonance imaging (MRI), but inconspicuous on ultrasound during radiofrequency and alcohol ablation of liver space-occupying lesions. **Methods:** Nine consecutive liver lesions; of size ranging from 1.2 to 4.7 cm; four metastatic and five primary HCC were subjected for US-guided radiofrequency or alcohol ablation earlier detected on either PET/CT or MRI. Using additional tools of CEUS or fusion imaging the pre, intra, and immediate post-RFA response was correctly judged; later confirmed on CT or PET study. In two cases, additional alcohol ablation was used to avoid heat sink effect due to main portal vein proximity and difficult RFA approach. **Results:** Except in two cases, all other lesions were considered as completely ablated based on pre- and post-CEUS enhancement pattern conducted before the patient was allowed to go home. One metastatic lesion showed definite peripheral enhancement and was reablated in additional sitting within next 2 h. In other case, CEUS showed minimal doubtful enhancement which on follow-up PET imaging was reported as post-RFA inflammatory response showing reducing standardized uptake values on repeat PET with absent enhancement on CEUS after 3 months. **Conclusion:** US guidance is at times handicapped by lack of confident identification of a lesion during ablation or by deciding the end-point of ablation merely on B-mode US due to difficulty in carrying out of immediate postablation PET/CT. This confusion can be minimized using real-time contrast US and fusion imaging to achieve the end-point.

#### P403

### Pictorial Review of Biliary and Enteric Stents: What a Radiologist Needs to Know

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**Background:** Enteric and biliary stents are important to recognize, however, these are commonly ignored and considered nonpathological in diagnostic imaging. Careful examination of the device is required to recognise common complications. Inexperience in the imaging appearances of such stents contributes to misinterpretation **Methods:** A pictorial review of biliary and enteric stents demonstrating how careful examination of such devices is essential to recognize and manage common complications. **Results:** We present a comprehensive pictorial review of metallic, biodegradable stents in a wide range of modalities. We discuss Imaging appearances of common complications of such stents including occlusion, migration, and fracture. **Conclusion:** A sound knowledge of the imaging appearances of enteric and biliary stents is essential to recognize common complications such as stent fracture and occlusion. Diagnostic radiologist needs to be aware of imaging appearance of a wide variety of stents in various modalities to facilitate prompt management when complications arise.

#### P404

### Fluoroscopic-Guided Self-Expandable Retrievable Esophageal Stent Application in Management of Postbariatric Surgery Anastomotic Leaks

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**Background:** Anastomotic leakage is a major complication of bariatric surgeries that can lead to high mortality and morbidity. Depending on the clinical presentation, management options include conservative management with or without external drainage, stenting, or surgical reintervention which carries relatively high morbidity and mortality rates. **Methods:** Self-expanding silicon stents were inserted under fluoroscopic guidance in 9 patients with radiologically diagnosed anastomotic leakage, 7 of them postbariatric gastric bypass operation and 2 patient after laparoscopic sleeve. Patients were referred for stenting between 7 and 26 days (mean 14 days) after surgery. Balloon repositioning was needed twice in one patient distal migration. The stent was left for 8 weeks in all patients. The patients were following a strictly fluid diet to avoid stent migration. Stents were removed endoscopically. The 9 patients were followed till removal of the stents. **Results:** A 100% technical success was achieved defined as successful positioning of the stent bypassing the leakage. Distal migration occurred twice in the same patient with balloon repositioning. Persistence of the leakage after stent removal took place in 4 patients (all were referred late 20 days postsurgery), 3 of which had resurgery and 1 patient who had residual tubular cutaneous-anastomosis fistula had track coiling with cessation of leakage. **Conclusion:** Fluoroscopic-guided esophageal stenting might be effective in bypassing anastomotic