ESER
ANNUAL SCIENTIFIC MEETING 2018
October 19-20, 2018 | Krakow, PL

Course Programme
Welcome words

Dear colleagues and friends,

It is the great honour and pleasure to welcome you to the Annual Meeting of the European Society of Emergency Radiology in Krakow/Poland, to be held from October 19-20, 2018.

We would like to extend a special welcome to young radiologists joining us in at this event; we recognise you are the future of the ever-expanding and ever-evolving field of radiology. We are sure that this year’s programme will not only meet your expectations but also exceed them. It has been carefully created by the Board of our Society, all of whom have made valuable contributions to the preparation of this meeting to ensure a varied and broad range of topics. We are proud to offer you workshops which will count towards the European Diploma of Emergency Radiology (EDER), a recent innovation which will unify Emergency Radiology expertise throughout Europe.

Besides this, Krakow is a town with amazing history, there are many places worth seeing and visiting. We offer you an unforgettable stay in the town of Kings and have no doubt you will leave having gained new radiological knowledge and great memories.

Sincerely yours,

Marek Stajgis
ESER Congress President

Stefan Wirth
ESER Society President
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### Friday, October 19, 2018

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<tr>
<td><strong>08:20-08:30</strong></td>
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<tr>
<td><strong>Opening</strong></td>
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<tr>
<td>M. Stajgis, Poznan/PL; S. Wirth, Munich/DE</td>
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<td><strong>08:30-10:00</strong></td>
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<tr>
<td><strong>Session 1: Central nervous system traumatic emergencies (Level 1-3)</strong></td>
<td><strong>Workshop 1: Case based: Tips and tricks for your first night shift (Level 1-2)</strong></td>
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<tr>
<td>08:30 Brain trauma - My first night duty</td>
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<td>P. Stajgis, Poznan/PL</td>
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<tr>
<td>08:51 Trauma Head CT: Easily missed pathology</td>
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<td>C. Calli, Izmir/TR</td>
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<td>09:12 Spine trauma - SLIC &amp; TLICS concept</td>
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<td>M. Stajgis, Poznan/PL</td>
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<td>09:33 Spinal cord injuries - How to be the most effective in fast diagnosis?</td>
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<td>M. Stajgis, Poznan/PL</td>
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<td>09:54 Quiz Case - Interaction</td>
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<td>M. Berndt, Munich/DE</td>
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<td><strong>10:00-10:20</strong></td>
<td><strong>Coffee Break</strong></td>
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<td><strong>10:20-11:50</strong></td>
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<td><strong>Session 2: Chest (Level 2-3)</strong></td>
<td><strong>(EDER) Workshop 2: Musculoskeletal (Level 3)</strong></td>
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<td>Moderators: F. Berger, Toronto/CA; K. Katulska, Poznan/PL</td>
<td>M. De La Hoz Polo, London/UK</td>
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<tr>
<td>10:20 Timely, innovative solutions for your Stroke program</td>
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<td>K. Bernier, France - CT Clinical Leader Europe</td>
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<td>10:40 Acute Chest Pain: Can Radiology make the difference?</td>
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<td>M. Scaglione, Castel Volturno/IT</td>
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<td>11:01 Pulmonary embolism: Clots and beyond</td>
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<td>P. Palczewski, Warsaw/PL</td>
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<td>11:22 Non-aortic, bronchi and diaphragmatic injuries - Critical issues</td>
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<td>M. Scaglione, Castel Volturno/IT</td>
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<td>11:43 Quiz Case - Interaction</td>
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<tr>
<td>F. Berger, Toronto/CA</td>
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<td><strong>11:50-12:20</strong></td>
<td><strong>Break &amp; Poster Review</strong></td>
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12:20-14:05

**Scientific Session (Level 1-3)**

**Moderator: U. Linsenmaier, Munich/DE**

12:20 Possibilities of ultrasound in diagnosis of diverticulitis in emergency practice
A. Fedorova, Moscow/RU

12:28 Cholecystectomy or percutaneous cholecystostomy as treatment for acute acalculous cholecystitis: 12 years of experience
I. Vicente Zapata, Murcia/ES

12:36 Abdominal X-Rays (AXR) in emergency: What role in the era of supertechnology?
F. Ruschi, Bolzano/IT

12:44 New perspectives in the follow-up of blunt liver and spleen injuries: The role of MR
F. Iacobellis, Naples/IT

12:52 Correlation of the severity of internal injuries in whole-body computed tomography emergency scans with traumatic skin and subcutaneous injuries
M.-A. Weber, Rostock/DE

13:00 The utilization of MRI in our emergency department for geriatric patients: A one year experience
N. Acar, Eskisehir/TR

**13:08 The Use of Orbita CT Scan for Three Years in Emergency Department of Eskisehir Osmangazi University Hospital**
N. Acar, Eskisehir/TR

13:16 Developing Artificial Intelligence algorithms for detection of intracranial hemorrhage
A. Agrawal, Delhi/IN

13:24 What has changed in radiological examinations in the last 6 years in an Academic Emergency Department from 2012 to 2018?
N. Acar, Eskisehir/TR

13:32 First oncologic diagnosis in patients presenting with acute abdomen: Role of CT in the detection and characterization
D.A. Caposiena, Chieti/IT

13:40 Anastomotic leaks after bariatric surgery: Diagnostic performance of CT
R. Danzi, Castel Volturno/IT

13:48 Bowel obstruction after bariatric surgery: Is the radiologist’s check really needed?
G. Avitabile, Castel Volturno/IT

13:56 Hemoptysis: Predictive factors of embolization
M. Martí De Gracia, Madrid/ES

13:00-14:20

**(EDER) Workshop 3: Polytrauma (Level 3)**
S. Wirth, Munich/DE

14:05-14:20 Break
14:20-15:50

**Session 3: Abdominal traumatic emergencies (Level 2-3)**

**Moderator: M. Scaglione, Castel Volturno/IT**

14:20  Abdominal solid organs injury – Key imaging features for key decisions  
*E. Dick, London/UK*

14:48  Bowel and mesentery – My important tips  
*M. Wykretowicz, Poznan/PL*

15:16  Pelvis – How to scan and what to look for?  
*R. Pacho, Warsaw/PL*

15:44  Quiz case – Interaction  
*U. Linsenmaier, Munich/DE*

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**Workshop 4: Acute Abdomen (Level 3)**

*R. Basilico, Chieti/IT*

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15:50-16:10  Coffee Break

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16:10-17:50

**Session 4: Non-traumatic acute abdomen (Level 2-3)**

**Moderators: E. Akpinar, Ankara/TR; R. Basilico, Chieti/IT**

16:10  Pancreatitis and complications  
*K. Katulska, Poznan/PL*

16:41  Appendicitis, diverticulitis and their mimics  
*R. Basilico, Chieti/IT*

17:12  How to manage with fluid collections?  
*E. Akpinar, Ankara/TR*

17:43  Quiz Case – Interaction  
*E. Akpinar, Ankara/TR*

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**Workshop 5: Case based review: Cross field ER (Level 1-3)**

*M. Stajgis, Poznan/PL*
Saturday, October 20, 2018

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<td><strong>REPEAT #1: Workshop 6: Case based: Tips and tricks for your first night shift (Level 1-2)</strong>&lt;br&gt;M. De La Hoz Polo, London/UK, A. Sandhu, London/UK</td>
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<td><strong>Session 5: Oncologic Patients (Level 2-3)</strong>&lt;br&gt;Moderators: A. Blanco Barrio, Murcia/ES; M. Stajgis, Poznan/PL</td>
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<tr>
<td>08:30</td>
<td>Oncologic patients in Emergency Department&lt;br&gt;A. Blanco Barrio, Murcia/ES</td>
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<td>08:51</td>
<td>CNS tumors - What is critical&lt;br&gt;C. Cali, Izmir/TR</td>
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<tr>
<td>09:12</td>
<td>Thoracic emergencies in patients with cancer&lt;br&gt;F. Iacobellis, Naples/IT</td>
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<td>09:33</td>
<td>Oncologic abdominal and pelvic emergencies&lt;br&gt;M. Michalak, Olsztyn/PL</td>
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<td>09:54</td>
<td>Quiz Case - Interaction&lt;br&gt;R. Onur, Ankara/TR</td>
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<td><strong>10:00-10:15</strong></td>
<td><strong>Oral/Poster Awardings &amp; Gold Medalist</strong>&lt;br&gt;M. Stajgis, Poznan/PL; S. Wirth, Munich/DE</td>
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<td><strong>10:15-10:35</strong></td>
<td><strong>Coffee Break</strong></td>
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<td>10:35</td>
<td>Emergency Teleradiology: When it's night in Europe the sun shines in Australia&lt;br&gt;P. Spencer, Sheffield/UK</td>
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<td>10:45</td>
<td>Acute abdomen in pregnant women - How to deal with it?&lt;br&gt;L. Grzycka-Kowalczyk, Lublin/PL</td>
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<td>11:05</td>
<td>Acute abdomen in children&lt;br&gt;R. Senasi, Sunderland/UK</td>
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<td>11:45</td>
<td>Expert Panel Discussion&lt;br&gt;L. Grzycka-Kowalczyk, Lublin/PL; K. Jonczyk-Potoczna, Poznan/PL; R. Senasi, Sunderland/UK</td>
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12:05-12:15 Break

12:15-13:15

Industry sponsored lunch symposium „Optimizing Patient Pathways through Innovative Emergency Radiology“
Optimizing CT Utilization through Structured Innovation and Workflow in the Acute Care Setting
F.C. Mueller, H. Raaschou; Herlev Hospital/DK
Dual Energy Spectral CT and Emergency Radiology: Clinical Applications in the Acute Care Setting
C. Booz, University Hospital Frankfurt/DE

13:15-13:45 Honorary Membership Awardings (Level 1-3)
Moderator: S. Wirth, Munich/DE

13:15 Introduction
S. Wirth, Munich/DE
13:25 Honorary Lecture „The development of Radiology in the next 10 years - My prognosis“
M-F. Reiser, Munich/DE
13:35 Honorary Lecture „Emergency Radiology in Europe - What is next?“
U. Linsenmaier, Munich/DE

13:45-14:05 Coffee Break

14:05-15:25 Session 7: Polytrauma, Mass Casualty Incidents and Terror – Case Based interaction (Level 1-3)
Moderator: S. Wirth, Munich/DE

14:05 Penetrating injuries: Protocols and key concepts
F. Mück, Munich/DE
14:30 „Road map“ in mass casualties incidents - How to prepare your institution for the most effective response
K.H. Nieboer, Brussels/BE
14:55 Mass casualties - What is similar, what is different from Polytrauma?
F. Berger, Toronto/CA
15:20 Quiz Case – Interaction
S. Wirth, Munich/DE

15:25-15:45 Closing
A. Blanco Barrio, Murcia/ES; M. Stajgis, Poznan/PL; S. Wirth, Munich/DE

(EDER) Workshop 8: Mass Casualty Organisation (Level 3)
F. Berger, Toronto/CA
**Invited Abstracts**

**Brain trauma – My first night duty**

P. Stajgis, Poznan/PL

Traumatic brain injury (TBI) is a significant cause of mortality and morbidity in Europe. Etiologies of TBI are highly associated with age; children suffer from abuse and falls mostly, young patients are the victims of motor-vehicle accidents or sport/recreation activities, falls only are the most common in elderly patients. TBI encompasses a wide, heterogeneous group of intracranial injuries that includes acute primary insults occurred at the time of impact and secondary ones such as cerebral swelling or herniation. Imaging is critical for diagnosis and proper management in all patients with TBI. Noncontrast CT is still the “gold standard” imaging modality in acute setting, because it identifies extravasation immediately. Epidural, subdural and subarachnoid hemorrhage (extra-axial) as well as cortical contusion, intraparenchymal hematoma, diffuse axonal injury (intra-axial hemorrhage) will be discussed. Conventional MRI sequences are less sensitive than CT in detection of hyperacute intracranial bleeding. However FLAIR technique are capable to detect even small amount of extravasated blood. Susceptibility-weighted imaging (SWI) is mandatory in evaluation of microhemorrhages, together with DWI they play an important role in diagnosis of axonal injury.

**Spine trauma – SLIC and TLICS concept**

M. Stajgis, Poznan/PL

Traumatic bone injury of the spine presents a great clinical and social problem as it often affects young and previously healthy patients. The role of radiologist is to detect and precisely indicate the areas of the spine which have been affected by the trauma. The knowledge of normal anatomy of the spine and the most common anatomical variants are absolutely necessary to make the correct diagnosis. Also the mechanism of injury is important – it’s understanding helps and simplifies the diagnostic pathwork. Crucial for the patient is to distinguish between stable and unstable fractures, this enables the optimal treatment (surgical vs. nonsurgical) – Denis concept of three columns of the spine is one of examples of common language between radiologist and neurosurgeon, but it has lot of disadvantages. The SLIC and TLICS concept of spinal trauma classification will be presented during the lecture. With no doubt MDCT with reformats is the 'gold standard' method in evaluation of traumatic bone injury and must be implemented in routine protocol in every patient with neurological or other clinical symptoms. Also MRI plays a very important role – it can detect the subtle injury symptoms like posttraumatic bone marrow edema, evaluate the degree of spinal cord compression with its consequences and determine the injury of soft tissues (e.g. ligaments). Finally, the disadvantages and traps of different imaging modalities will be presented.

**Learning objectives:**
1. To understand the mechanisms of traumatic bone injury.
2. To learn about SLIC and TLICS concept of spine trauma classification.
3. To become familiar with advantages and disadvantages of different imaging techniques in spinal trauma.

**Spinal cord injuries – How to be the most effective in fast diagnosis?**

M. Stajgis, Poznan/PL

Acute traumatic spinal cord injury (SCI) in majority of cases results with devastating medical and social consequences. MR examination is the imaging method of choice in assessment of lesion morphology, extent and severity of trauma. To interpret obtained MR images correctly one has to understand the mechanisms of SCI, which are similar to brain diffuse axonal injury in large number of patients. For optimal characterization of SCI one has to start with estimation of maximum canal compromise and the degree of spinal cord compression at the beginning. Then qualitative intramedullary changes should be evaluated: cord swelling, edema, contusive hemorrhage, hematomyelia, partial or complete laceration. Patients with minimal cord changes at MR imaging usually have the best outcome, then the group of patients with cord edema is the next. Contrary, intramedullary hemorrhage...
is a single predictor of the bad outcome. It is also accepted that the level of injury has the influence on the eventual prognosis. Protocol for routine, fast and effective MRI examination in patients with SCI, which consists of SE, GRE and non-obligatory MRA is proposed. One also has to remember about non-mechanical acute SCI conditions like iatrogenic complications after vertebral radiofrequency ablations, high voltage electrical injury etc.

Learning objectives:
1. To understand the mechanisms of spinal cord injury.
2. To learn about MR imaging findings in different traumatic abnormalities of the spinal cord.
3. To be familiar with fast and effective protocol of MR examination in patients with spinal cord injury.

Workshop: Tips and Tricks – Your first night shift
E. Dick, A. Sandhu; London/UK
This practical case-based workshop session lead by a Senior Resident and Consultant will simulate conditions on your first night shift. A wide range of ‘classic’ and not so easy cases will be shown, you will have an opportunity to make a diagnosis and to discuss the importance of the radiological findings and their influence on clinical management. We will give you tips to avoid missing anything, as well as tricks for managing the clinical team, particularly when you are under pressure. This will be a lively session to build your confidence on call.

Learning objectives:
1. Increase your exposure to common and not-so-common emergency cases
2. Identify any weak points you may have so you can do further focused learning
3. Understand the limitations of imaging
4. Simulate working under pressure in the night shift environment, including knowing when to call for back-up

Acute chest pain: Can Radiology make the difference?
M. Scaglione, Castel Volturno/IT
Chest pain is a common presenting problem in everyday practice. In the United States, an estimated 6-8 million people per year present to the emergency department with chest pain. An estimated 50-70% of patients presenting with chest pain in the emergency department will be placed in an observation unit or admitted to the hospital. Many are admitted unnecessarily for observation; 2-5% are discharged inappropriately. Most do not have cardiac etiology (70/90%). Approximately 8 billion dollars are used annually to evaluate complaints of chest pain. In the emergency setting, radiology is of great asset for timely identifying the castellation of possible diagnoses, risk stratification and medical decision making by using chest x-ray, CT and MR. In this lecture, the active role of emergency radiologists in the A&E is shown by illustrating lots of cases from the daily practice.

Non-aortic, bronchi and diaphragmatic injuries. Critical issues
M. Scaglione, Castel Volturno/IT
Non-aortic, bronchi and diaphragmatic injuries are rare and usually represent difficult diagnosis in any context, particularly in the emergency setting. Detailed MDCT protocols and advanced post-processing techniques, clues for diagnosis, tips and tricks and cases, cases from the daily pracise will be shown. Finally, the role of emergency radiologists will be emphasized. Actually she/he is of great asset not only for providing the diagnosis by also for addressing the patients towards the most correct and timely management approach.
Workshop: Musculoskeletal
M. De La Hoz Polo, London/UK

Musculoskeletal trauma and non-traumatic conditions are commonly encountered in the emergency department. Some of these entities, such as septic arthritis and necrotising fasciitis may require urgent orthopaedic intervention. Failure to recognize life-threatening infections conveys significant risks. This workshop will focus on a variety of MSK emergencies, their imaging characteristics and will help you to identified the key features that will make you “reach the phone and make that call” to the clinicians.

Learning objectives:
1. To become familiar with common imaging presentations of acute traumatic and non-traumatic entities involving the skeleton and soft tissue, excluding complex traumatic fractures
2. Discuss pathophysiology of musculoskeletal emergencies
3. Recognition of life threatening MSK emergencies

Workshop: Polytrauma
S. Wirth, Munich/DE

Polytrauma remains a leading cause of death and disability worldwide, especially in the age group below 40 years. As time is particular related to outcome, diagnoses have to be provided clearly within the golden hour and also important interventions or surgical treatment should at least have been begun within this time span. Wide availability, fast and exact diagnosis as well as increased survival have established whole-body CT as the key modality for initial diagnostic polytrauma service. However, the large amount of whole-body CT images requires solutions to ensure efficient and timely interpretation as well as immediate distribution of the report and the images.

Trained staff, optimised and standardised processes as well as fundamental knowledge of key injuries that require urgent treatment are indisputable prerequisites. Important, typical image findings of very high acute relevance are: active haemorrhage, non-stable fractures of the spine, sternum and pelvis, pneumothorax, heart, aortic and major vessel injuries, bronchial ruptures, laceration of lung, liver, spleen or kidneys, pancreatic injury with ductal involvement, diaphragmatic or intestinal rupture.

In the offered ‘hands-on’ workshop, representative case studies are processed individually and resolved together. Possible problems are sought to push intense and fruitful discussions.

Learning objectives:
1. To learn how read whole body polytrauma CT’s timely
2. To train prioritization of findings
3. To develop strategies how to handle problems in organization, scanning, reading, interpretation, and communication
4. To develop attitudes to reappraise morbidity and mortality conferences

Pelvis – How to scan and what to look for?
R. Pacho, Warsaw/PL

Radiology Department of Military Institute of Aviation Medicine

Pelvic trauma is one of the major injuries that can lead to death despite of the advances in Emergency Medicine. It is estimated that 10 to 18% patients with these types of injuries have a complicated clinical outcome. On one hand, organs situated in the pelvis are well protected by the bone structures of the pelvic girdle, on the other hand bone fracturing may lead to lesions of the vessels and other organs. In example, typically the ischial spine and tuberosity may damage the branches of the internal iliac artery (gluteal and pubic arteries) and fracturing of the pubic bones may lead to injury of the urinary bladder, ureter and prostate.
Particularly dangerous is the tearing of blood vessels, especially of the larger ones, because the lack of fascial compartmentation may lead to uncontrollable bleeding. Ruptures of the anus are also very dangerous, they may lead to bacterial spreading in the retroperitoneum.

Computed tomography (CT) is the main diagnostic tool in injuries of the minor pelvis and their complications. CT scans obtained in the Emergency Department help in early triaging and administering adequate treatment. Early identification of hemorrhaging enables quick invasive radiological or surgical intervention.

Ultrasoundography (USG) plays a minor role in pelvic injury diagnosis because of its limitations in bone imagining and the obfuscation of the view caused by intestinal gas. Magnetic Resonance Imaging (MRI) also is used rarely in diagnosing pelvic injuries, mainly in the assessment of the female urethra and lesions of the peripheral nerves.

**Thoracic emergencies in patients with cancer**

F. Iacobellis, Naples/IT

Thoracic emergencies in patients with cancer may result from local effects of the primary tumor, its metastasis, paraneoplastic syndromes, or reaction to the chemotherapy. Patients usually present with acute dyspnea and chest pain. These symptoms may be related to the lungs and airways (drug toxicity, pulmonary infections, or malignant airway compression), the cardiovascular system (pulmonary embolism, superior vena cava syndrome, cardiac tamponade, or massive hemothysis), mediastinum (esophageal perforation, acute mediastinitis, or esophago-airway fistula), spine and spinal cord (invasion and cord compression).

Many oncological emergencies are signs of advanced disease, but occasionally patients present to the emergency department (ED) with a previously unknown primary tumor.

Imaging plays a crucial role in both the initial diagnosis and therapeutic management. Depending on the severity of the clinical symptoms, the initial imaging evaluation in the ED begins with a chest radiograph followed by a contrast-enhanced CT scan. CT is the imaging modality of choice in the evaluation of oncological patient. It allows to localize lesions and detecting related complications. Digital subtraction angiography is used in the evaluation and treatment of vascular conditions such as superior vena cava obstruction, hemothysis, or arterial hemorrhages. In the thorax, MR is used as a problem-solving tool, especially in cases of spinal cord involvement or compression.

In this lecture the imaging approach and the findings of most common thoracic oncological emergencies will be discussed.

**Oncologic abdominal and pelvic emergencies**

M. Michalak, Olsztyn/PL

Oncologic emergencies can occur at any time of malignant disease from the initial diagnosis, throughout active treatment, to follow-up. An oncologic emergency may be defined as any acute potentially morbid or life-threatening event directly or indirectly related to a patient’s tumor or its treatment. Identification of oncologic emergencies can save patient life or improve quality of life, even in the end-stage disease. Some abdominopelvic emergencies are well managed with conservative or non-invasive treatment, whereas the rest of them require urgent surgery. It is essential to determine which procedures should be undertaken or avoided. Method of treatment depends on the imaging findings, age, clinical status of the individual patient, cancer stage and survival prognosis.

The most common oncologic abdominal and pelvic emergencies are: obstruction, compression, torsion, perforation, hemorrhage, rupture, infection or organ failure. They can be the result of the primary tumor, metastatic spread, paraneoplastic syndrome, reaction to the chemotherapy, radiotherapy or complication of surgery. Medical imaging plays a crucial role in ensuring a prompt diagnosis but radiologists should be aware of the variety of challenging imaging findings. CT and MRI are the primary imaging modalities for diagnosis of abdominopelvic emergencies. Imaging guided interventions including embolisation and percutaneous drainages play important role in the non surgical management.
Quiz Case – Interaction

M.R. Onur, Ankara/TR

Oncologic patients may present to emergency services with various symptoms. Due to underlying oncologic disease physical examination findings and laboratory results may cause difficulty in the diagnosis and misleading findings in emergency settings. In this presentation, imaging findings of two oncology patients presented to emergency service will be discussed with history, symptoms, physical examination and laboratory test results of the patients. Probability of encountering different imaging findings due to primary oncologic disease and treatments will be emphasized.

Workshop: Tips and Tricks – Your first night shift

M. De La Hoz Polo, A. Sandhu; London/UK

This practical case-based workshop session lead by a Senior Resident and Consultant will simulate conditions on your first night shift. A wide range of ‘classic’ and not so easy cases will be shown, you will have an opportunity to make a diagnosis and to discuss the importance of the radiological findings and their influence on clinical management. We will give you tips to avoid missing anything, as well as tricks for managing the clinical team, particularly when you are under pressure. This will be a lively session to build your confidence on call.

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Acute abdomen in pregnant women – How to deal with it?

L. Grzycka-Kowalczyk, Lublin/PL

Acute abdomen in pregnancy may be caused by various, not pregnancy-related conditions, and poses a diagnostic and managing challenge to the attending physician. The specific physiological features of the mother and possible influences on the fetus have to be taken into consideration in the diagnostic approach of acute abdomen in pregnancy. Because of the pregnancy, restrictions are imposed on diagnostic modalities such as x-ray and CT. However, delay in diagnosis and treatment could lead to a serious condition in both the mother and child. Thus, prompt and appropriate decision-making and subsequent treatment are needed. Ultrasonography is the first choice modality in diagnosis of acute abdomen in pregnancy because it is non-invasive to both the mother and fetus and because a large amount of information can be obtained by this simple procedure. The safety and the possibility of a systematic cross-sectional evaluation of the entire abdomen have been considered as important reasons for the use of magnetic resonance imaging (MRI) in pregnancy with intractable pain. This presentation addresses diagnostic approaches to proper diagnosis and covers the most common causes of acute abdomen in pregnant women.
Acute Abdomen in Paediatrics

R. Senasi, Sunderland/UK

There are many causes for the acute abdomen in paediatrics. Although there may be some overlap with adults, neonates, infants and children have some conditions that are more unique to their particular age group. Although this is an extensive topic, I have tried to compress this into approximately ten minutes. The focus will be on key communication issues with clinicians and two very life-threatening conditions; malrotation/volvulus and intussusception. Finishing with some tips on pyloric stenosis and appendicitis.

The overall purpose of this lecture is to equip the on call non-Paediatric Radiologists with some key decision-making and diagnostic skills to deal with these unique conditions.

Traumatic injuries in children: Is it always CT?

K. Jonczyk-Potoczna, Poznan/PL

Traumatic injury is a common reason for a child to be admitted to an Emergency Department and/or to an Intensive Care Unit. In children, blunt injury is more frequent than penetrating injury. Head injuries in the child happen very often, partly because the child becomes a projectile in an accident, hurling through the air, with the head being at the front of the projectile. Most patients with head trauma are classified as having minor head injury, defined as no or brief loss of consciousness and amnesia accompanied by a Glasgow Coma Score (GCS) of 13-15.

A number of pediatric trauma classification systems are used to predict morbidity, mortality, and resource utilization (eg, diagnostic studies, specialized personnel, operative intervention). Some examples presented in the lecture are described below.

Glasgow Coma Scale – the GCS constitutes a widely applied scoring system for all trauma patients. Modification of the GCS to pediatric patients has been an important advance in the assessment of age-appropriate behavior in both verbal and preverbal children. In addition, for both preverbal (<2 years old) and verbal (>2 years old) children, GCS correlates with the presence of traumatic brain injury (TBI) in patients with blunt head injury.

The PECARN (Paediatric Emergency Care Applied Research Network) traumatic brain injury algorithm is a clinical decision rule that aims to identify children at very low risk of clinically important traumatic brain injury (ci-TBI). This validated paediatric algorithm predicts likelihood of the above and guides the decision to CT examination.

In the literature various modifications of algorithms to improve their effectiveness in reducing the number of CT scans performed in children after trauma can be found.

In addition, a non-accidental injury should not always be ruled out, especially in the youngest age group. In case of children with abusive head trauma, the medical interview is inconsistent with the degree of injury or is absent at all. Abused children are also often associated with findings of retinal hemorrhages, fractures, unexplained bruises, apnea, and/or seizures.

Learning objectives:
1. To learn about the diagnostic imaging approach in paediatric head injury.
2. To become familiar with the differences between the Paediatric Glasgow Coma Scale and adult one.
3. To become familiar with the differential diagnosis of accidental or non-accidental injuries.
Workshop: Special patient groups

K.H. Nieboer, Brussels/BE

In this workshop, we will focus on the “oh no!” patients. Patients you would rather like to come into your hospital when you are not on call. We consider pregnant trauma, pediatric trauma, geriatric trauma and oncologic complications as special patient groups.

We will focus on the trauma work up in the pregnant, pediatric and elderly and discuss about the differences and similarities in work up compared to the “normal” adult patient. By reviewing cases, we will go over focus points and mechanisms to recognize pathology.

In the case of oncologic patients, it is essential to be aware of acute complications due to their treatment. The primary inputs to solve these cases are clinical information and actual treatment. Probably we will not have time enough to cover all possible lesions and complications, but we can raise awareness for these special patient groups.

Learning objectives:
1. Where to look for in a pregnant trauma case
2. Where to think of in pediatric trauma
3. What is different in geriatric trauma
4. Get knowledge of some of the most frequent acute complications in oncologic patients

The development of Radiology in the next 10 years – My prognosis

M.-F. Reiser, Munich/DE

Apart from an ongoing development in radiological technologies there are various trends in our field and in healthcare which have great impact on radiological practice within the next 10 years. There is an ever increasing demand for imaging. In most industrial countries this resulted in a shortage of radiological professionals. However, there are also trends in the opposite direction, such as point-of-care ultrasound utilized by clinicians, employment of radiological data by clinicians without involvement of radiologists and refinements of liquid biopsy, the diagnosis of diseases and their course by biomarkers which can be detected and quantified in various fluids of the human body.

Interventional radiology (IR) is a story of success. Percutaneous transluminal angioplasty, tumor ablation, embolization of tumors and bleeding, and vertebroplasty have been introduced by pioneers in IR. Some of these methods became the accepted treatment of choice and began to jeopardize the mere existence of other medical disciplines, such as vascular surgery. In turn, other clinical disciplines adopted IR techniques and radiology was elbowed out of these areas.

Artificial intelligence (AI) is an emerging technology which will have high impact on many professions as well as the whole society. Radiological images are digital data and therefore well suited for the application of AI. In 2016 Geoffrey Hinton, a computer scientist at the University of Toronto, remarked at the 2016 Machine Learning and Market for Intelligence Conference that medical schools should stop training radiologists now because they will not be displaced by AI technology in five to 10 years. This recommendation, however, seems to be rather hasty. There are significant challenges with respect to practical implementation of deep learning/artificial intelligence.

The more realistic forecast would be that once AI becomes an established technology in radiology, it will allow radiologists more time to work with both clinicians and their patients. Rather than being diminished, radiologists will assume the leadership role of being aggregators of all data that passes through the diagnostic process. It has been said that the question will not be “artificial Intelligence or radiologists” but rather “radiologists with or without artificial intelligence”. My prediction for the next 10 years would be that there will be a gradual implementation of IR tools and radiologist would be well advised to embrace this new technology and take an active role in its implementation.
“Precision Medicine” has become a widely accepted overarching paradigm of modern medicine and radiology which has great potential to contribute to diagnostic and therapeutic strategies directed to individual patients or subpopulations of patients. Various approaches exist which are essentially based on digitization and extraction of data which allow for higher precision in the characterization of patients, their diseases and the presumable response to a particular therapy. Imaging biomarkers based on quantitative imaging are the prerequisite for radiomics. Radiomics enables to extract complex biological information from analysis of imaging concerning prognosis and potentially most promising therapeutic interventions. It has become mandatory for all medical disciplines to prove their impact on the outcome of patients. This is especially difficult for diagnostic imaging which only indirectly is associated with patients’ outcome. Extensive science and lobbying efforts are required to convince decision makers of the importance of imaging diagnostics for treatment decisions and the result of medical interventions. Closely associated with that are measures to improve quality both of medical imaging and reporting and structured reporting has great potential to contribute to that goal. The next ten years seem to be crucial for the further development of radiology and we face huge challenges and opportunities. It lies in the hands of the radiological community whether imaging will degenerate to a commodity or become a central clinical discipline.

Road map in mass casualty incidents – How to prepare your institution for the most effective response

K.H. Nieboer, Brussels/BE

A Mass Casualty Incident (MCI) is the situation where the capacity of healthcare resources are overwhelmed by the number of victims. There is no threshold on the number of victims involved in the definition of an MCI because this situation depends on the baseline capacity of the resources. An MCI can be of natural origin or can be human-made, either unintentional or intentional. The healthcare system has to be prepared well for this kind of events. Most of us work in hospitals where a Disaster Management Plan (DMP) is developed, available and trained. In most hospitals, the radiology department is not (directly) involved in the core of the DMP. Nevertheless, radiology can play an essential role in the management of an MCI. Imaging can dramatically improve the accuracy of patient triage and treatment. However, if not incorporated in the DMP, the radiology department can become the bottleneck in case of an MCI and will be avoided by trauma surgeons and physicians. The key is to be prepared with the radiology department. Define the available resources; imaging equipment, imaging protocols, radiologists, technologists, support, IT, communication tools and do this for daytime and nightshift scenarios. Design a process map, going over all the steps necessary to guarantee the smoothest pathway through imaging for these MCI victims. For every step, a detailed problem listing should be created and resolved. Finally, this preparation work should be incorporated in the hospital’s DMP and trained. During this lecture, we will focus on the most critical issues a radiology department has to tackle in this process map.

Invited Abstracts appear as submitted and have not been checked for correctness and completeness. Subject to changes, printing and typesetting errors.
Scientific Session Abstracts

Possibilities of ultrasound in diagnosis of diverticulitis in emergency practice

U. Birukova, A. Fedorova, A. Zubarev, M.A. Evseev, A.L. Vladykin, V.A. Lyanenko

Purpose of this study was to evaluate possibilities of ultrasound in the differential diagnosis of diverticular bowel disease, diverticulitis and other acute abdominal pathology.

Methods and Materials: We examined 29 patients aged 48 to 95 years, who were admitted to a hospital with clinical symptoms of an acute abdomen. All 29 patients had a comprehensive clinical study, including collection of anamnestic data, physical examination, laboratory-instrumental methods. In 21 (72.5%) patients preliminary clinical diagnosis was diverticulitis, in 1 (3.4%) patient - a suspicion of acute appendicitis, in 1 (3.4%) - sigmoiditis, and in 2 (7%) - the presence of gastrointestinal bleeding. Ultrasound examination of all (100%) patients was carried out for emergency indications, therefore, we did not conduct special preparation for the study of the intestine. To assess the informative value of ultrasound in the diagnosis of diverticulitis, we compared ultrasound data with final clinical diagnosis.

Results: In 68.9% of cases, a comprehensive ultrasonography made it possible to confirm the initial diagnosis, in 20.7% of cases - changed the preliminary diagnosis. As a result of statistical analysis, sensitivity was 68%, specificity 80.0%, accuracy 72.0%, PPT 86.0%, NPT 57.0%. It should be noted that our study was limited to a small number of patients, the lack of morphological verification and comparison with laparoscopic data.

Conclusion: Ultrasound should be considered as a method of the first line in diagnosis of diverticular bowel disease and its complications.

Cholecystectomy or percutaneous cholecystostomy as treatment for acute acalculous cholecystitis: 12 years of experience

I. Vicente Zapata, D. Flores Funes, A. Blanco Barrio, J.F. Sánchez Melgarejo, V. Soria Aledo, A. Carrillo Alcaraz; Murcia/ES

Purpose: To compare the outcomes and efficacy of cholecystectomy and cholecystostomy in patients with acute acalculous cholecystitis (AAC) in our institution.

Methods and Materials: Data from 84 patients with AAC (57 males, 27 females; mean age: 65.6 years) whether treated with surgery or conservative treatment, were collected over a 12-year period. Descriptive analysis of this retrospective cohort was performed along with a case-control study of a subgroup of patients matched by sex, age, American Association of Anesthesiology (ASA) and Charlson indexes. Conservative treatment included patients only on antibiotics and those with percutaneous cholecystostomy (PC) and antibiotics. Demographic, clinical characteristics and co-morbidities were analysed. Differences were considered significant when P < 0.05.
Results: 53 patients (63.1%) were treated with urgent cholecystectomy and 31 (46.9%) were treated conservatively. In patients treated conservatively, both the Charlson and the ASA indexes were significantly higher (> 5 in 54.8% vs. 28.3%; > 3 in 71% vs. 30.2%, respectively). There were no complications related to the procedure in patients treated conservatively whereas 13 patients in the surgery group had complications. Mortality was higher (5 versus 0) in the conservative treatment group. In the matched case-control study (53 patients, 32 with surgical treatment and 21 with non-surgical treatment) morbidity remained higher in the surgery group. No differences in mortality rates were seen between the two groups.

Conclusion: Good therapeutic outcomes from conservative treatment suggest that PC + antibiotics can be the option of choice and the definitive treatment of AAC, especially in high-risk patients.

Abdominal X-Rays (AXR) in emergency: What role in the era of supertechnology?

F. Ruschi, Bolzano/IT

Purpose: To evaluate the appropriateness of AXR request in the acute setting, to analyze the different types of ileus and to determine the role of AXR in the management of acute patients.

Methods and Materials: Emergency AXR of 297 patients were retrospectively evaluated and classified as: negative, fecal stasis, local/diffuse spastic ileus, local/diffuse hypotonic ileus, paralytic ileus, mechanical ileus, presence/absence of foreign bodies. The most common clinical indications were: abdominal pain (26.93%), intestinal occlusion (14.48%), constipation (11.44%), perforation (10.47%), vomiting (9.76%). The radiographic picture was related to the subsequent management of patients: observation and discharge, indication for a CT scan, urgent medical or surgical treatment.

Results: Considering the recommended guidelines of the RCR, AXR were appropriately requested in 27.95%. In cases of “abdominal pain” AXR were negative in 71.25%, in patients with “constipation” were negative in 47.06% and fecal stasis was found in 47.06%, in patients with “vomiting” AXR were negative in 72.41%. The prevalence of illness (established with CT or with following medical/surgical treatment) was respectively of 23.81% in cases of radiographic spastic ileus, 13.04% in hypotonic ileus, 37.50% in paralytic ileus and 100% in mechanical ileus.

Conclusion: The majority of emergency AXR are inappropriate and they should be primarily used when obstruction, perforation and foreign bodies are suspected. Serial AXR can be useful in the assessment of the evolution between the different types of ileus, evaluating the time elapsed since the onset of the pathological condition, its course to improvement or worsening and the need for further imaging examinations or urgent medical/surgical treatment.

New perspectives in the follow-up of blunt liver and spleen injuries: The role of MR

F. Iacobellis, M. Di Serafino, A. Brillantino, A. Mottola, S. Del Giudice, L. Romano; Naples/IT

Purpose: The standard of care for blunt liver and spleen injuries in hemodynamically stable patients is the non-operative management. So, it is necessary to establish an adequate imaging method to follow-up these patients, that may undergo delayed complications. MR may represent a good option, considering its panoramicity, the lack of ionizing radiation, and also the possibility to avoid contrast media. In our Institution MR was in-troduced for the follow-up of hemodynamically stable trauma patients with blunt liver and spleen injuries. The aim is to describe the imaging findings and the signal behavior in the adopted imaging sequences.

Methods and Materials: The imaging protocol was tailored to each patient. Post-contrast sequences were acquired especially in the early follow-up, and in high grade injuries. In suspected biliary complications, MR cholangiographic sequences were added.
Results: Eleven patients with spleen (5 pts.) and liver (6 pts.) injuries of low (5 pts.) and high (5 pts.) grade, were followed-up by MR. The signal behavior of the healing lesions was documented and described. In 3 patients liver intraparenchymal collections were detected, MR allowed to characterize them and to examine the biliary ducts communication. In 1 case was observed the development of spleen intraparenchymal pseudoaneurism that was subsequently embolized.

Conclusion: MR may constitute an alternative to CT to follow-up patients with blunt liver and spleen injuries. In this preliminary experience, MR allowed to identify and monitoring, in a less invasive way, vascular and parenchymal liver and spleen injuries.

Correlation of the severity of internal injuries in whole-body computed tomography emergency scans with traumatic skin and subcutaneous injuries

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3Diagnostic and Interventional Radiology, Rostock University Medical Centre, Rostock/Germany

Purpose: To correlate traumatic skin and subcutaneous injuries, such as bruises and hematomas, deep abrasions, and soft tissue emphysema with severity of internal post-traumatic injuries in whole-body computed tomography (WBCT) emergency scans.

Methods and Materials: 250 consecutive patients that had undergone WBCT emergency scans for suspected polytrauma were analyzed. The scan was indicated after fulfilling criteria of standard operating procedures for WBCT emergency scans in our institution and included the entire head, neck, thorax, and abdomen for every patient. The CT analysis was performed by two radiologists and included a detailed visual analysis of the skin surface.

Results: Skin and subcutaneous lesions of the thorax had the strongest association with internal injury (Fisher’s exact test, p<0.001). A skin lesion of thorax wall was detected in 19 cases and in 17 of these cases an internal injury of the thorax was present. Only two patients with hematoma of chest wall had no internal injury. Skin lesions of abdominal wall were observed in 30 cases. In only 11 cases, these lesions were correlated with internal damages, such as fractures or active bleeding. Fifty-two skin and subgaleal lesions of the scalp were observed. In 20 of these patients, an intracranial or internal injury was detected. In three patients, skin abrasions of the neck were present, and in only one, this finding was correlated with internal injury.

Conclusion: When trauma mechanism is appropriate and cutaneous lesions of neurocranium or thorax cavity are observed, an internal lesion in these locations must be taken into consideration.

The utilization of MRI in our emergency department for geriatric patients: A one year experience

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Purpose: Making the right choice of imaging when dealing with geriatric emergency situations is crucial for emergency physicians. Magnetic resonance imaging (MRI) is a expensive choice, but sometimes the optimal means of evaluation.
Methods and Materials: This was a retrospective study comparing resource utilization in the last one year in a university hospital emergency department (ED). MRIs ordered during ED stay of patients were accepted as ED based MRs. Result criteria included hospital resource utilization, demographics, and clinical characteristics. Descriptive statistics are presented with frequency, percentage, mean, standard deviation, and minimum and maximum values. A chi-square analysis was conducted to examine the relationship among age, sex, and the proportion of admission hours according to the groups. Analyses were conducted using the SPSS 22.0 package program.

Results: In the ED, MRI is available 24/7. MRI was performed on 954 (479 female, 475 male) patients. A total of 14 lumbar, 9 cervical, 12 dorsal MRIs, 84 brain MRI and 294 Diffusion MRI were performed for geriatric patients with the age of 65 and over. There was no significant sex difference except for lumbar MRI; its rates were nearly two times higher in men than in women. Lumbar MRI and diffusion MRI groups were admitted to the hospital mostly in the day hours (p = 0.03); in other groups, night and day admissions were almost the same.

Conclusion: MRI is used for efficient patient management with rapid patient turnaround for geriatric patients in the ED.

The Use of Orbita CT Scan for Three Years in Emergency Department of Eskisehir Osmangazi University Hospital

N. Acar, H.H. Gursoy; Eskisehir/TR

Purpose: To report the use of orbita ct scan in an academic emergency department.

Methods and Materials: We examine retrospectively the use of orbita CT scan for three years in Emergency Department of Eskisehir Osmangazi University Hospital.

Results: Total 257949 patients visited emergency department from July 31th, 2015 to July 31th 2018. 670 (%) of them were examined by computed orbita tomography [306 (45.7%) blunt trauma, 173 (25.8%) penetran trauma, 92 (13.7%) periorbital infection, 54 (8.1%) motor vehicle collision, 18 (2.7%) cellulitis, 10 (1.5%) gunshot wounds, 10 (1.5%) foreign bodies, 2 (0.3%) vitreus bleeding, 2 (0.3%) visual decrease, 2 (0.3%) chemical and thermal burns and 1 (0.1%) pain of mass]. The age of the patients ranged from 2 to 98 years. We examined 466 (69.6%) male and 204 (30.4%) female patients. 222 (33.1%) of 670 performed CT scan revealed abnormal findings [112(50%) preseptal cellülitis, 42(18.9%) fractures of orbital walls, 35(5.2%) glob perforations, 11(5.0%) intraocular foreign bodies]. The ophtamologists operated 127 (19.0%) patients [78 (61.4%) penetran trauma, 37 (29.1%) blunt trauma, 5 (3.9%) mvc, 5 (3.9%) gunshot wound, 2 (1.6%) vitreus bleeding] were operated by. 243 (36.3%) patients were hospitalized [211 (86.8%) patients to the ophtalmology clinic, 32 (13.2%) patients to the intensive care unit].

Conclusion: Orbital patologies were more common in men. Trauma and infectious situations were common. Most of patients were treated conservatively.

Developing Artificial Intelligence algorithms for detection of intracranial hemorrhage

A. Agrawal, P. Akhawat, C. Aschkenasi, A. Kalyanpur

Purpose: To develop and validate artificial intelligence algorithms for faster identification of intracranial hemorrhage (ICH) in an emergency radiology practice.

Methods and Materials: A hybrid approach of Machine Learning (Convoluted neural network) and Image processing algorithms was developed on a training set of 3380 CT head images for the detection of intracranial hemorrhage, of which 1680 were positive for ICH. These algorithms were applied on a validation set of 300 CT head examinations, of which 164 were positive for hemorrhage, as reported by experienced emergency radiologists.
Results: Application of the AI algorithms identified 182 examinations as positive for intracranial hemorrhage and 118 examinations as negative. Subsequent validation indicated that 159 examinations were True Positive, 20 cases were flagged as False Positive, 116 were flagged as True Negative and 5 cases flagged as False Negative. This yielded an overall sensitivity of 97%, specificity of 85.3%, and an accuracy of 91.7%.

Conclusion: Artificial intelligence algorithms are useful in identifying intracranial hemorrhages with reasonable accuracy and can be of value in prioritizing critical examinations in a busy emergency radiology practice. This would help reduce report turnaround time and expedite clinical response.

What has changed in radiological examinations in the last 6 years in an Academic Emergency Department from 2012 to 2018?

N. Acar, M.E. Canakci, E. Ozakin; Eskisehi/TR

Purpose: Emergency Medicine (EM) Residents need knowledge of some Radiologic exams at caring of patients. What has changed in radiological examinations in the last 6 years?

Methods and Materials: We analysed change of radiological exams from June 1st, 2011 - May 31st, 2012 and June 1st, 2017 - May 31st, 2018 in ED.

Results: Exam numbers and change ratios were given in the table.
Conclusion: We should especially educate our residents about the most used radiologic exams and their indications, limitations and contraindications. They must learn how properly report and use these exams in a decision making process, especially in an emergency status.

**First oncologic diagnosis in patients presenting with acute abdomen: Role of CT in the detection and characterization**

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**Purpose:** The aim of this study is to illustrate the key role of MDCT in the first diagnosis of neoplasm in patients presenting with acute abdomen in emergency setting.

**Methods and Materials:** During a 12-month period, 1977 consecutive patients presenting in our emergency department (ED) with acute abdominal symptoms, were included in our retrospective study. All patients underwent abdominal MDCT scans. Images were acquired using a 64-slice CT scanner before and after contrast medium administration.
Results: 88/1977 unknown abdominal tumors were found (41 M, 47 F, mean age 61), classified, according to CT findings, as follows: 42 GI tumors (32 large bowel, 6 stomach, 4 small bowel), 8 pelvic masses, 16 pancreatic neoplasms, 5 lymphomas, 9 neoplasms of genito-urinary tract (3 renal, 6 bladder), 1 adrenal mass, 3 biliary tract tumors, 2 HCCs with abdominal bleeding and 2 peritoneal carcinomatosis. 36/88 patients underwent emergency surgical treatment and in 6/88 an interventional procedure was performed.

Most frequent signs and symptoms were: abdominal pain and bloating, vomiting, jaundice, fever, hematuria, flank pain and anemia. The main detected CT findings in emergency were: bowel obstruction, ascites, biliary tree distension, urinary obstruction, hemoperitoneum and peritoneal carcinomatosis”.

Conclusion: MDCT is an accurate imaging modality in the diagnosis of unknown primary neoplasm as a cause of acute abdomen, playing an important role in the management and treatment of patients presenting in ED with acute symptoms. Its limit could be the identification of primary tumor in advanced oncologic stage in patients with ascites and peritoneal carcinomatosis.

Anastomotic leaks after bariatric surgery: Diagnostic performance of CT
F. Pezzullo, R. Danzi, E. Laccetti, F. Iacobellis, A. Sorbo, M. Scaglione; Castel Volturno/IT

Background: Timely diagnosis of anastomotic leakage after bariatric surgery and adequate treatment is important to reduce morbidity and mortality. Abdominal computed tomography (CT) scanning is the diagnostic tool of preference, but its value may be questionable in the early postoperative period. The accuracy of CT scanning for the detection of anastomotic leakage and its role in timing of intervention was evaluated.

Methods: Consecutive patients who underwent a CT scan for a clinical suspicion of anastomotic leakage after bariatric surgery between 2017 and 2018 were analyzed. The CT scans were systematically re-evaluated by two radiologists for the presence of specific CT findings and presence of an anastomotic leak. Also, the original CT interpretations were acquired. These results were compared to patients with and without a clinical confirmed leak.

Results: Out of 122 patients that underwent CT for a clinical suspicion of anastomotic leakage; 54 had a confirmed leak. In multivariable analysis, anastomotic leakage was associated with peri-anastomotic air, peri-anastomotic collection, extravasation of contrast medium and a fistula. The sensitivity, specificity, and positive and negative predictive values of MDCT in diagnosing a leak was 0.91, 1, 1, and 0.95, respectively.

Conclusion: Multi-detector CT should be used as the modality of choice in diagnosing the post-operative complication after bariatric surgery.

Bowel obstruction after bariatric surgery: Is the radiologist’s check really needed?

Background: Bariatric surgery has become always more important in the last year. Sleeve gastrectomy and gastric by-pass has become the most relevant surgical technique in these patient. However, this kind of surgery does not lack of complications including the small and large bowel occlusion.

Methods and Materials: We retrospectively analyzed a group of 116 CT of patients that came to our Emergency Department (ED) from January 2016 to January 2018, with acute abdominal pain after bariatric surgery in the last 10 years, in order to evaluate the most frequent radiological CT findings in these patients.

All the CT studies were acquired in the portal phase, after intravenous injection of contrast medium. Oral contrast was not administered.
**Results:** In 65 patients out of 116, CT findings result:
- Anastomotic dehiscence 16.9%
- Volvulus 12.3%
- Internal hernia 10.8%
- Bridle, adherence and anastomosis stenosis 10.7%
- Fascial and subcutaneous haemorrhage 6.2%
- Complicated laparocele with ischaemia 6.2%
- The rest of the patients didn't show significant pathological findings at CT scan

**Conclusion:** Radiologists should be familiar with complications after bariatric surgery. In bowel obstruction after bariatric surgery, the radiologist’s role in the ED is not only to support or exclude the clinical suspicious but to address the timing of management. Actually, anastomotic dehiscence, volvulus, internal hernia, complicated laparocele needed immediate surgery whereas simple small bowel obstruction may be initially managed conservatively.

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**Hemoptysis: Predictive factors of embolization**

M. Martí De Gracia, A. Jiménez Rodrigo, A. Díez Tascón, A. Borobia, M.J. García Sánchez, T. Hernández Cabrero; Madrid/ES

**Purpose:** To identify if there are predictive factors to recommend embolization

**Methods and Materials:** Retrospective observational analysis of patients who request attention at emergency department due to threatening hemoptysis. Period 2015–2018. All patients are explored with chest x-ray and computed tomography angiography (CTA). Two groups are established: (G1) conservative therapeutic management and (G2) embolization by angiography. Secondary variables: demographic, clinical (hemodynamic situation, evolution), radiological (alveolar hemorrhage, responsible lung injury, pathological bronchial arteries).

**Statistical analysis:** T-Student and Chi-square are used. Logistic regression was performed by backward steps with the variables that are significant in the univariate analysis (p<0.05). The IBM SPSS Statistics V.20 software is used.

**Results:** 48 patients are included: G1: 33 patients (68.8%) G2: 15 (31.2%). Men are 36 (75%), age between 43 and 94 years old. Hemodynamic instability is found in 7 patients (14%). The evolution is favorable in 43 (89%). Chest X-ray revealed alveolar opacities in 28 patients (58%). Lung lesions identified: bronchiectasis (15) neoplasms (10), infectious (10) others (9) nothing (2). Bronchial pathological arteries are found in 19 (39%). There are differences in therapeutic management among patients with neoplasms, bronchiectasis and with pathological bronchial arteries (24% in G1 vs 73% in G2, p = 0.002). These variables are included in the logistic regression model, resulting only for the variable “pathological bronchial arteries” statistically significant (S = 0.83 E = 0.72)

**Conclusion:** In threatening hemoptysis, the identification of pathological bronchial arteries in the CTA is a good predictor of the need for embolization.
Poster Titles

**P1. Ultrasound of the Right Iliac Fossa: Is it appendicitis or something else?**
S. Mureva, S. Menon, G. Tann, D. Ranford, Dartford/UK

**P2. Is everyone aware of the Canadian Cervical Spine Rules? An audit on the adequacy of acute traumatic cervical spine imaging referrals in adult patients in a teaching hospital**
S. Haydar, H. Hirji; London/UK

**P3. Isolated blunt rupture of the VCI**
E. Ozakin, N. Acar, G. Gök, V. Erçan, B. Bastug Tiryaki; Eskisehir/TR

**P4. Radiological and clinical features of gastric volvulus**
F. Landolfi, D. Sergi, D. Caruso, A. Laghi; Rome/IT

**P5. Abdominal active bleeding: The nightmare for the resident on call at the ER**
J. Vicente Zapata, A. Blanco Barrio, A. Moreno Pastor, J. Plasencia Martínez; Murcia/ES

**P6. Finding its way to your heart: Cardiac bullet embolism - A case and brief discussion**
J.J. Pretorius, P. Rabie, F.E. Suleman; Pretoria/ZA

**P7. Iatrogenic renal trauma: Urgent conditions post-ESWL**
N. Mladenova, G. Kirova; Sofia/BG

**P8. Urinoma an infrequent finding**
J. Melo Villamarín, S. Brugger Frigols, P. Estellíes, R. Piquerás, F. Catalá, O. Jácome Torres, M. Barreda; Valencia/ES

**P9. Radiotherapy-induced fatal acute carotid blowout syndrome for hypopharyngeal cancer**
A. Bielinis, E. Mockiene, R. Grigiene, J. Usinskienė; Vilnius/LT

F. Iacobellis, M. Di Serafino, C. Acampora, G. Russo, R. Niola, F. Amodio, L. Romano; Naples/IT

**P11. MR role in penile trauma: A case report**
M. Di Serafino, F. Iacobellis, G. Ponticiello, C. D'Errico, C. Acampora, L. Romano; Naples/IT

**P12. Computed tomography (CT) assessment of left ventricular pseudoaneurysm in emergency department**
E. Bulotaite, D. Nepomniščis; Vilnius/LT

**P13. Can pulmonary embolism be diagnosed in unenhanced chest CT?**

**P14. Are you ready for the unexpected – Breast ultrasound in the Emergency Room!**
A. Agrawal, Chethana SM, A. Kalyanpur; Delhi/IN

**P15. Ancillary and additional findings at spiral CT in patients suspected for acute pulmonary embolism**
S. Foutzitzi, A. Oikonomou, S. Deftereos; Alexandroupolis/GR

**P16. Importance of thorax radiography in emergencies department**
S. Brugger Frigols, J.F. Melo Villamarín, R. Piquerás, P. Estelles Lerga; Valencia/ES

**P17. Free wall rupture as a rare complication of myocardial infarction and its diagnosis**
E. Horváth, G. Gerges, I. Kóos, E. Csengo, T. Szerafin, T. Debreceni, F. Bodnár, G. Gergely, L. Kostyáli, G. GY. Nagy; Miskolc/HU, Debrecen/HU

**P18. Correlation of pelvic fractures and associated injuries: An analysis of 471 pelvic trauma patients**
M. Saydam, M. Sahin, K.B. Yılmaz, S. Tamam, I. Gunes Tatar, Y. Bilgetekin, A. Atila, G. Unlu, P. Demir; Ankara/TR
P19. Immediate complications following bariatric surgery  
B. Seccia, D.A. Caposiena, M. d’Annibale, B. Faricelli, A. Delli Pizzi, M. Romanelli, E. Mincuzzi, B. Sessa, R. Cianci,  
R. Basilico, A.R. Crotoneo; Chieti/IT

P20. CT imaging and interventional treatment of acute renal bleeding  
M. Romanelli, B. Sessa, D.A. Caposiena, D. Gabrielli, M. d’Annibale, B. Faricelli, E. Mincuzzi, R. Cianci, A. Delli Pizzi,  
B. Seccia, R. Basilico, A.R. Crotoneo; Chieti/IT

P21. Alveolar opacities in intensive care patient: Separating the wheat from the chaff  
L. Fabrizio, M. Scutti, L. Mazzamurro, C. Valdesi, S. Conte, R.L. Patea, M. Mereu, A.R. Crotoneo; Chieti/IT

P22. Diagnostic performance of single-pass contrast-enhanced multi-detector row CT in non traumatic acute bowel disease  
R. Danzi, F. Pezzullo, F. Riccitiello, A. De Gennaro, I. Liccardo, L. Camera; Castel Volturno/IT

P23. CT angiography in patients with clinical positivity and negative CT findings for ischemic ictus  
A. Soro, F. Pezzullo, M. Altiero, F. Iacobellis, A. Zandolino, M. Scaglione; Castel Volturno/IT

P24. Thoracic splenosis: The importance of a detailed anamnesis  
G. Butera, F. Landolfi, D. Sergi, D. Caruso, A. Laghi; Rome/IT

P25. Nonoperative management of splenic injuries in children: The radiologist’s role and imaging findings  
G. Petrocheilou, A. Larda, C. Tsilikas, A. Stratigopoulos, I. Vlachou, I. Alexandrou, S. Stathopoulos; Athens/GR

A. Larda, G. Petrocheilou, C. Tsilikas, M. Anagnostou, I. Vlachou, S. Stathopoulos; Athens/GR

P27. A rare but distinct cause of significant lower gastrointestinal bleeding  
R. Dhuno0, S. Dixon1, M.S. Shaikh3, S. Moreea2; 0Sydney/AU, 1Bradford/UK

P28. Double Whammy - Diverticular perforation after Transurethral bladder tumour resection?  
A. Menon1, G. Menon2, I. Syed3, J. Menon4; 1London/UK, 2Oxford/UK, 3Essex/UK

P29. Thromboembolic phenomena in trauma: A case series and short discussion  
J.J. Pretorius, F.E. Suleman; Pretoria/ZA

P30. Case report. Gastroesophageal pneumatosis after endoscopy  
T. Malevska, A. Zvigure; Riga/LV

P31. Emergency ultrasound in trauma: New challenges for the radiologist  
G. Petrocheilou1, I. Vlachou1, P. Argyriou1, D. Karakitsos2; 1Athens/GR, 2Columbia/US

P32. Spilled gallstones: An unconventional cause of sepsis  
F. Landolfi, G. Butera, D. Sergi, D. Caruso, A. Laghi; Rome/IT

P33. Infectious Spondylodiscitis in the Emergency Room (ER): Early signs in Computed Tomography (CT)  
M. Martí de Gracia, J.A. Barrios López, A. Diez Tascón, J.I. Rodríguez Martin, D. Bernabéu Taboada, M. Muñoz Martí;  
Madrid/ES

Poster Titles appear as submitted and have not been checked for correctness and completeness.  
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CME Accreditation

The ESER Annual Scientific Meeting 2018, Krakow, Poland, 19/10/2018-20/10/2018 has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 10 European CME credits (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

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Please find below the breakdown of ECMEC®s per day:

19.10.2018  6.00
20.10.2018  4.00

Disclosure Statement

Potential Conflict of Interest Disclosures

It is the policy of the ESER – European Society of Emergency Radiology to ensure balance, independence, objectivity, and scientific rigour in the congress programme. Knowledge of possible relationships with sponsors of any kind is mandatory in order to reinforce the educational and scientific message and to relieve any suspicion of bias.

Any potential conflict of interest involving the organising committee should be made known so that the audience may form their own judgements about the presentation with a full disclosure of the facts. It is for the audience to determine whether the presenter’s external interest may reflect a possible bias in either the work carried out or the conclusions presented.

The ESER 2018 congress president, Dr. Marek Stajgis, did not disclose any relationships.
ESER 2018 Faculty

E. Akpinar, Ankara/TR
R. Basilico, Chieti/IT
F. Berger, Toronto/CA
M. Berndt, Munich/DE
A. Blanco Barrio, Murcia/ES
C. Calli, Izmir/TR
M. De La Hoz Polo, London/UK
E. Dick, London/UK
L. Grzycka-Kowalczyk, Lublin/PL
F. Iacobellis, Naples/IT
K. Jonczyk-Potoczna, Poznan/PL
K. Katulska, Poznan/PL
U. Linsenmaier, Munich/DE
M. Michalak, Olsztyn/PL
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R. Pacho, Warsaw/PL
P. Palczewski, Warsaw/PL
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R. Senasi, Sunderland/UK
M. Stajgis, Poznan/PL
P. Stajgis, Poznan/PL
S. Wirth, Munich/DE
M. Wykretowicz, Poznan/PL
General Information

**Congress Venue**
Holiday Inn Krakow City Centre
Ul. Wielopole 4
31-072 Kraków
Poland

**Floor Plan**
Organising Secretariat
European Society of Emergency Radiology
Am Gestade 1
1010 Vienna | Austria
office@eser-society.org

Onsite Congress Office
In case of any questions, kindly consult the ESER registration desk, staff persons will be happy to assist you.

Registration Desk Opening Hours
Friday, October 19 07:30-18:00
Saturday, October 20 08:00-16:00

Conference Language
The meeting will be held in English. No simultaneous translation will be offered.

Badge
You are kindly asked to keep your badge visible on the congress grounds at all time.

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All attendees have access to wireless internet during the conference:
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Media Center
The media center is located in the back of the lecture room. Trained staff will be available to assist you with the equipment.
The media center should only be used for a test run of your presentation(s). Please note that the media center should not be used to prepare your entire presentation; the workstations are only available for minor editing.

Certificate of Attendance
The Certificate of Attendance/CME Accreditation will be handed out at the registration desk on the last congress day.

Registration fee for delegates includes:
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- admittance to the industry exhibition
- congress programme and abstracts
- certificate of attendance
- coffee breaks
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- You are kindly requested to submit your presentation one hour before your session starts at the latest (USB sticks are recommended).
- All presentations have to be uploaded to the conference IT-system. No personal computer will be accepted for projection.
- Please be at the lecture room at the latest five minutes prior to the start of your session and identify yourself to the moderator(s).
- Kindly observe your presentation time. Exceeding the time limit will not be accepted and the moderator(s) are requested to stop presentations in such cases.

Onsite Payment
Onsite payment can only be made by credit card (Visa or Mastercard) or in cash (Euro). Please understand that no other payment facilities like cheques, etc. will be accepted.

Name Changes
Name changes will be treated like the cancellation of the registration and a new registration of the other participant.

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This area offers you an overview of future meetings in the field of radiology and related disciplines, from all over the world. Feel free to contribute flyers and posters to promote your own meetings and courses.

Recording
Photo-, video- or audio-recording of any sessions or presentations is not allowed without the speaker’s/organiser’s prior written permission.

Filming and Photography
We would like to inform you that there may be filming and photography during the Annual Meeting. Photographs taken during ESER 2018 may be used for the society’s social media channels and/or the website.

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Saturday, October 20, 10:35-10:45
LR Emergency Teleradiology: When it’s night in Europe the sun shines in Australia
P. Spencer, Sheffield/UK

Saturday, October 20, 12:15-13:15
LR Industry sponsored lunch symposium „Optimizing Patient Pathways through Innovative Emergency Radiology“
Optimizing CT Utilization through Structured Innovation and Workflow in the Acute Care Setting
F.C. Mueller, H. Raaschou; Herlev Hospital/DK
Dual Energy Spectral CT and Emergency Radiology: Clinical Applications in the Acute Care Setting
C. Booz, University Hospital Frankfurt/DE
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