

**INTERNATIONAL  
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**International Day of Radiology 2017  
Interview on Emergency Radiology  
Russia/Dr. Elvira Akchurina**

**Moscow radiologist and radiology educator Dr. Elvira Akchurina says Russian radiologists share emergency radiology caseload and advocates for additional training in residency**

***European Society of Radiology:** Could you please describe the role of the radiologist in a typical emergency department in your country?*

**Elvira Akchurina:** In our hospital, there is a radiologist on duty at night. The radiologist gets a request for an emergency study and gets acquainted with the case. In complicated cases, and if time permits, the radiologist speaks with the patient or emergency physician to understand the trauma and selects the best diagnostic approach. Radiologists control the examination and interpret its results. Then they discuss the radiologic findings with the emergency physician.

***ESR:** What does a typical day in the emergency department look like for a radiologist?*

**EA:** Usually it's a busy day with lots of cases. During breaks radiologists interpret nonemergency cases.

***ESR:** Teamwork is crucial in an emergency department. How is this accomplished in your department and who is involved?*

**EA:** Effective teamwork is the only way to get the correct diagnosis quickly. Timely diagnosis is crucial for finding the optimal treatment plan in emergency cases. In our department, we use a picture archiving and communication system (PACS), radiological information system (RIS) and hospital information system (HIS), and radiologists have access to patients' charts. And, of course, the radiologist discusses the clinical history and key imaging findings with the referring physician.

***ESR:** How satisfied are you with the workflow and your role in your department? How do you think it could be improved?*

**EA:** I like the organisation of workflow in my department and the friendly atmosphere between physicians and nurses. I think it would be better if emergency physicians would offer radiologists more clinical-history detail on patients and provide clearer indication for the examination.

In our country, imaging modalities (e.g. ultrasound and x-ray) frequently are divided by department. That's why Russian radiologists often can't select imaging modalities or get complete radiologic information about patients. Some radiologists are not able to perform and interpret all imaging studies. I think that we should prolong the Russian radiology residency course to include all modalities and emergency-medicine training. I would prefer to unite all diagnostic modalities in one department and rotate specialists.

We have no national standards of examination of patients with different pathology. Therefore, the selection of imaging methods depends also on the hospital's equipment and economic circumstances.

***ESR:** Which modalities are used for different emergencies? Could you please give an overview sorted by modalities?*

**EA:** We use x-rays to detect fractures and joint dislocations, small- and large-bowel obstruction, free intraperitoneal gas, pneumothorax, and foreign bodies.

Ultrasound is used when the physician suspects cholecystitis, pancreatitis, gynaecologic pathology or appendicitis; also, ultrasound is common in paediatric practice.

Traumatic brain injury, acute stroke or brain haemorrhage, complex skeletal trauma (especially polytrauma cases), nontraumatic chest pain or dyspnoea, suspected pulmonary embolism, aortic or cardiac pathology, acute abdomen (pancreatitis, diverticulitis, epiploitis, mesenteric infarct, renal colic etc.) are most common indications for CT.

MRI is used less often for emergency cases. The most common indications are suspicions to acute brain or spine pathology. Sometimes we use cardiac MRI to exclude acute myocarditis or when contrast-enhanced CT is contraindicated.

In patients with acute coronary syndrome, our cardiologists and endovascular surgeons perform coronary catheterisation and stenting when necessary. More often, we use coronary CTA in patients with acute chest pain and low probability of myocardial infarction or unstable angina to exclude acute coronary pathology.

**ESR:** *Is teleradiology an issue in emergency radiology? If yes, how so, and how often is it used?*

**EA:** Teleradiology for emergency cases is routine in our department. We use it every night. During night shifts a senior radiologist stays at home and uses remote access to hospital PACS. In emergency cases, a radiographer sends images to PACS, and then a radiologist makes a report and sends it back to the referring clinician.

Russia is a very large country with seven time zones. Teleradiology was crucial when our department evaluated studies in Russia's Far East region and quickly sent protocols back for their use. Also, we use teleradiology in difficult cases when we ask experts for a second opinion.

**ESR:** *Are emergency radiologists active anywhere other than emergency departments? Do they have other nonemergency roles, or other emergency roles in other departments?*

**EA:** In our hospital, emergency radiology is a part of the general radiology department. Most of our radiologists also work as emergency radiologists. That means that they conduct nonemergency examinations, as well. In our country, there are very few departments and hospitals that manage only emergency pathology. Most hospitals have many departments in addition to the emergency department, and radiologists must work on emergency and nonemergency cases.

**ESR:** *Do you have direct contact with patients and if yes, what does it entail?*

**EA:** Often in Russia, the radiologist stays in the room with a technician or radiographer and the patient. Therefore, we can talk with patients and their relatives or attendants. Radiologists even can make a short physical examination of a patient if necessary. Direct contact with patients and their relatives can be helpful in making the correct diagnosis in complex cases. Also, if the patient has any questions, we can answer them.

**ESR:** *How are radiologists in your country trained in emergency radiology? Is emergency radiology a recognised specialty in your country?*

**EA:** Alas, so far there is no such subspecialty in Russia. Most residents practice emergency radiology during their hospital training, but the duration and quality of this training varies widely. We hope this situation changes soon.

**Dr. Elvira Akchurina, MD, PhD**, works as a senior radiologist in the Radiology Department of a Federal Center of Treatment and Rehabilitation in Moscow, Russia. She is a general radiologist, but her areas of special interest are abdominal and pelvic imaging, including acute pathology and early postoperative complications, and oncological imaging. In addition to this she is a part-time assistant professor at the Medical Faculty of Moscow State University, where



she teaches radiology to medical students and residents. She is a well-known speaker at congresses and conferences, and she lectures in radiology courses in Russia. Dr. Akchurina has been an ESR member since 2008. In 2010 she took part in the Junior Image Interpretation Quiz. She serves as a reviewer for the ESR journal *Insights into Imaging*. This year Dr. Akchurina became a member of the Electronic Presentation Online System (EPOS) reviewer team. Dr. Akchurina is an author and co-author of several papers on diagnostic imaging.