

**INTERNATIONAL
DAY OF RADIOLOGY**

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**International Day of Radiology 2017
Interview on Emergency Radiology
Brazil/Dr. Luis Ronan Marquez Ferreira de Souza**

Improving workflow in Brazilian emergency departments depends on automating digitalisation of patient data and sharing patient information with other health systems, according to Luis Ronan Marquez Ferreira de Souza

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

Luis Ronan Marquez Ferreira de Souza: We all know that radiologists have a primary role in providing a fast, differential diagnosis that may help in efficiently treating emergency patients. In teaching hospitals, radiologists also review and discuss cases with medical students and residents.

In Brazil, universities have increased the number of places available for medical training. Unfortunately, this increase is not necessarily reflected in these professionals' quality maintenance, and they end up demanding a lot of complementary examinations to make treatment decisions. With this, the radiologist has increasingly a role of offering exclusion hypothesis and helping to determine the procedures to be followed in an emergency environment.

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

LR: We perform a lot of ultrasound scans for many situations, including trauma. The emergency department has heavy workload due to urban violence in Brazil.

Also on a typical day, we interpret CTs of the head, acute abdomen and pulmonary thromboembolism, and we rely on x-rays for bone fractures and lung imaging. Also, radiologists review and discuss cases with residents and staff members.

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

LR: The response time between the examination request and the delivery of the final radiology report must be fast. Therefore, all the professionals involved must be prepared. Technicians and nurses are qualified to carry out the first stages of the procedures, including patient reception and preparation, and assist during the examination, in accordance with radiologists' protocols.

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

LR: There is a lot of room for improvement. The key to improving workflow quality would be to automate patient data and digitise patient records to be able to access patients' previous clinical information from other health services.

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

LR: X-ray and ultrasound are the first, and most widely used, modalities in cases of abdominal pain and bone fractures. CT scans are requested in cases of discrepancy or doubt as to the

correct diagnosis on head scans and abdominal or thoracic examinations. MRI only is indicated in cases of spinal trauma.

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

LR: It is used in remote centres, which have fewer trained radiologists, and it helps in second-opinion reports. Teleradiology is not common in my region.

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

LR: Radiologists have a half-time, non-emergency assignment in the region where I work. Few radiologists are dedicated exclusively to emergency care in my state.

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

LR: Yes I do, when performing ultrasound exams and when it is necessary to fill the gap in clinical information, for instance when scan requests are incomplete or in cases of potential allergic reactions.

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

LR: Emergency radiology training is on the job during night or weekend shifts during the second and third years of residency. It is beginning to be recognised in large centres and hospitals that treat large numbers of trauma and emergency patients.

ESR: *Many cases you are faced with in the emergency setting are challenging, but can you remember what was your most impacting experience? What knowledge did you gain from that experience?*

LR: I vividly remember an aortic aneurysm rupture during contrast injection in an axial tomography scan eight years ago. It is very important that the radiology department and the emergency room are prepared for such occurrences.



Dr. Luis Ronan Marquez Ferreira de Souza is associate professor and radiology residents' preceptor at Universidade Federal do Triângulo Mineiro (UFTM) in Uberaba, Minas Gerais, Brazil. He received his doctorate in medical sciences and clinical radiology from the Universidade Federal de São Paulo (UNIFESP/EPM) in 2005.

His main research interests are abdominal and women's imaging, working mainly with ultrasound, MRI and CT.

He is the author of 40 papers, 25 book chapters and more the 100 scientific posters and oral presentations. He is also member of three Brazilian radiology institutions, including the College of Brazilian Radiology (CBR). He

also is a member of the European Society of Gastrointestinal and Abdominal Radiology (ESGAR) and the Radiological Society of North America (RSNA).

He has been helping residents and medical students to celebrate IDoR in his country since 2014.