

**International Day of Radiology 2014**  
**Interview on brain imaging**  
**Brazil / Dr. Emerson Gasparetto**



**INTERNATIONAL  
DAY OF  
RADIOLOGY**  
AN INITIATIVE OF THE ESR, ACR AND RSNA

The ESR spoke to Dr. Emerson Gasparetto, associate professor at the department of radiology at the Federal University of Rio de Janeiro, and executive director of radiology and diagnostic imaging at DASA, a private medical diagnostics company, about the evolution of brain imaging in Brazil.

**ESR: Imaging is known for its ability to detect and diagnose diseases. What kind of brain diseases can imaging help to detect and diagnose?**

**Emerson Gasparetto:** Nowadays, the available neuroimaging methods perform best in relation to diseases that present macroscopic or, in some cases, microscopic brain damage, such as stroke, demyelinating diseases, tumours, etc. Still, we have a limited role in diseases with more complex pathophysiologic processes, such as psychiatric diseases.

**ESR: How useful is imaging in brain disease management? Does it improve the understanding of disease or improve patient prognosis?**

**EG:** In several diseases, imaging findings are used to help define the best management, such as defining the best surgical approach in brain tumours, as well predicting the prognosis, for example in multiple sclerosis and brain tumours.

**ESR: What kind of technology and techniques do radiologists use to image the brain? Are there any specific techniques for particular diseases?**

**EG:** We perform computed tomography (CT) scans, especially in the acute phase of brain trauma and stroke, and use magnetic resonance imaging (MRI) for the remaining diseases.

**ESR: What is the difference between a radiologist and a radiographer? Who else is involved in performing brain imaging exams?**

**EG:** The difference is that the radiographer, who is a technician, is responsible for image acquisition under the guidance of the radiologist. The radiologist then reads the images and writes a report.

**ESR: Access to modern imaging equipment is important for brain imaging. Are hospitals in your country equipped to provide the necessary exams?**

**EG:** Yes, in the last few years, access to state-of-the-art technologies has expanded in many countries, including Brazil.

**ESR: In many countries there are waiting lists for MRI exams. How long can patients typically expect to wait for an exam in Brazil?**

**EG:** It depends and varies a lot, but usually a patient will wait a week to get an MRI examination.

**ESR: As the global population gets older, the risk of developing neurocognitive and neurodegenerative disorders increases. How can imaging help tackle this issue?**

**EG:** Imaging techniques will play a significant role as biomarkers in these diseases.

**ESR: Some imaging techniques, like x-ray and CT, use ionising radiation. What risk does this radiation pose to the patient and what kind of safety measures are in place to protect the patient?**

**EG:** Usually the radiation dose in neuroimaging exams, except in angiography, is very low. In addition, in many neurological cases we are able to use MRI, which uses no radiation.

**ESR: In general, patients don't see the radiologist. A patient will discuss the image with the**

**neurologist, neurosurgeon or oncologist. When they ask a question, they're often told: "I'm not a radiologist". Why don't radiologists discuss the image with the patient first?**

**EG:** This is a clinical routine, but we encourage radiologists to keep in contact with referring physicians, to keep them up to date in terms of imaging advances.

**ESR: How expensive are radiological examinations to the health service and is there a risk that some of these examinations could be blocked by health technology assessment agencies deeming them to be not cost-effective (especially in relation to screening)? If so, how can patients help to ensure that these examinations are made available?**

**EG:** It varies a lot depending on the public or private sectors, what kind of healthcare insurance, what kind of clinics, etc.

***Emerson Gasparetto** is associate professor of the department of radiology, Federal University of Rio de Janeiro, and executive director of radiology and diagnostic imaging at DASA, a private medical diagnostics company. He obtained his medical degree from the Federal University of Paraná, and his Masters of Science and Doctor of Science degrees from the Federal University of Rio de Janeiro.*

