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## Editorial

# Where We are Standing in the Choice of Most Effective Radiological Imaging for Patient's Benefits?

Today the radiologic investigations are the indispensable diagnostic tools in medical care especially in emergency, oncology and pediatry departments. The imaging has the benefits for the patients follow-up as well as the diagnostic significance. In the last fifteen years the advanced imaging techniques in neuroradiology provides very important data of the brain such as metabolites with MR Spectroscopy, microvasculature with perfusion imaging, integrity of white matter with diffusion tensor imaging and network of cortex with functional imaging. These techniques are performing for oncologic patient monitoring and preoperative evaluation as well as the early diagnosis of stroke. Advanced techniques also takes place in abdominal imaging techniques such as MR spectroscopy, perfusion, diffusion, dynamic contrast imaging and recently elastography. These are performing to characterize the suspected liver and prostatic gland lesions. MR elastography and relatively breast MRI are also new modalities improving the diagnosis of malign and benign lesions.

As the technology of imaging techniques improves and spreads like branches of a tree, the choice of most effective one is being difficult day by day. The confused minds might lead to the requests of unnecessary radiologic investigations. In the Emergency Departments clinicians are ordering increasing numbers of computed tomography scans (CT), CT angiography, magnetic resonance imaging (MR), and MR angiography to evaluate headache [1]. Research suggests that many of these studies are duplicative or otherwise unnecessary [2]. Imaging is costly and CT's subject patients

to dangerous ionizing radiation, increasing risk of malignancy [3]. There are also a lot of unnecessary advanced neuroimaging requests for the first diagnosis from Neurology Departments and for the follow-up from the Oncology Departments. This may be due to lack of knowledge about the indications of the advanced techniques.

The complaint of clinicians may be the easiest way. However what we are doing as radiologists to solve this increasingly complicated problem. As the professionals who have an important role on patients medical management, we have to take the responsibilities of all radiologic investigations in our institution. That means we should be able to decide which radiological examinations is beneficial to the patient in accordance to requests from clinicians. We should also share our experience and knowledge for indications of radiological techniques and evidence-based guidelines with clinicians more frequently. Yet little is known regarding best methods for reducing unnecessary imaging we should have to improve our dialog with clinicians and help them with evidence-based guidelines. This might avoid unnecessary costs /radiation for the benefits of patients and labor for the benefits of medical staff.

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