

Greater Role for Radiology

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EDITORIAL NOTE

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Role of radiology in oncology

Interventional oncology is an increasingly emerging subspecialty of radiology that is powered by technology. Over the past few years, many notable clinical advances have given patients hope in the battle against cancer, especially where traditional treatment has failed or is considered inadequate [1,2]. Functional imaging has now emerged as an important weapon in the battle against cancer within the field of diagnostic radiology, considering its ability to anticipate tumor response faster than anatomical imaging, as well as diagnose early recurrence [3].

Role of the radiologist

Radiologists have generally played a passive function when it comes to health treatment [4-6]. When ordered by the clinician, the radiologist records the imaging analysis or executes an interventional treatment. The radiologist concerned is also not aware of a detailed view of the clinical condition prior to the radiological investigation or involvement [7].

With more proactive treatment of more challenging clinical situations, fueled by the advent of highly advanced imaging and therapeutic technology, radiologists are now playing a more involved role in patient management, acting in more cases as equal partners [8]. As a result of direct radiologist-to-patient interaction, novel imaging modalities and treatment approaches will be made available to patients directly through the radiologist, sometimes almost as soon as they arrive on the market.

Cone beam CT scan

Imaging technology in the interventional suite is another promising area of growth. New imaging machines can help

administer therapeutic agents more reliably. Chemotherapeutic medications are administered directly to the arteries providing blood to the tumor during regional chemotherapy [9]. Theoretically, a higher dosage of a drug administered to the tumor results in an improved cytotoxic effect. This has been shown in pancreatic cancer, where there has been proof of dose-dependent tumor sensitivity [10]. The appearance of 'tumor blush' or pathological neovascularity in standard angiography historically defines tumor vascularity. This can be difficult with a typical DSA, particularly when superselective cannulation is necessary or when the vascular anatomy is complicated.

REFERENCES

1. Corey KE, Pratt DS. Current status of therapy for hepatocellular carcinoma. *Therap Adv Gastroenterol.* 2009;2: 45-57.
2. Peng ZW, Lin XJ, Zhang YJ, Liang HH, Guo RP, Shi M, et al. Radiofrequency ablation versus hepatic resection for the treatment of hepatocellular carcinomas 2 cm or smaller: a retrospective comparative study. *Radiology.* 2012;262: 1022-1033.
3. Pereira FP, Martins G, Carvalhaes de Oliveira Rde V. Diffusion magnetic resonance imaging of the breast. *Magn Reson Imaging Clin N Am.* 2011;19:95-110.
4. Tan CH, Wang J, Kundra V. Diffusion weighted imaging in prostate cancer. *Eur Radiol.* 2010;21:593-60
5. Kim YS, Rhim H, Cho OK, Koh BH, Kim Y. Intrahepatic recurrence after percutaneous radiofrequency ablation of hepatocellular carcinoma: analysis of the pattern and risk factors. *Eur J Radiol.* 2006;59:432-441.
6. Grobner T. Gadolinium-a specific trigger for the

- development of nephrogenic fibrosing dermopathy and nephrogenic systemic fibrosis? *Nephrol Dial Transplant.* 2006;21:1104-1108.
7. Patterson EJ, Scudamore CH, Owen DA, Nagy AG, Buczkowski AK. Radiofrequency ablation of porcine liver in vivo: effects of blood flow and treatment time on lesion size. *Ann Surg.* 1998;227:559-565.
 8. Simon CJ, Dupuy DE, Mayo-Smith WW. Microwave ablation: principles and applications. *Radiographics.* 2005;25:S69-83.
 9. Yu Z, Liu W, Fan L, Shao J, Huang Y, Si X. The efficacy and safety of percutaneous microwave coagulation by a new microwave delivery system in large hepatocellular carcinomas: Four case studies. *Int J Hyperthermia* 2009;25:392-398.
 10. Gravante G, Ong SL, Metcalfe MS, Strickland A, Dennison AR, et al. (2008) Hepatic microwave ablation: a review of the histological changes following thermal damage. *Liver Int* 28: 911-921.

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