

PET/CT today: System and its impact on cancer diagnosis

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Over the past six years, PET/CT has spread rapidly and replaced conventional PET. Although PET/CT is a combination of PET for functional information and CT for morphological information, their combination is synergistic. PET/CT fusion images result in higher diagnostic accuracy with fewer equivocal findings. This results in a greater impact on cancer diagnosis. With attenuation correction performed by the CT component, PET/CT can provide higher quality images over shorter examination times than conventional PET. As with all modalities, PET/CT has several characteristic artifacts such as misregistration due to respiration, overattenuation correction due to metals, etc. Awareness of these pitfalls will help the imaging physician use PET/CT effectively in daily practice.

Key words: positron-emission tomography; tomography scanners, X-ray computed; ^{18}F -FDG; radionuclide imaging