

## Diagnostic Accuracy of Positron Emission Tomography-CT (PET-CT) in Recurrent Gastric Cancer

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**Purpose:** To assess diagnostic accuracy of attenuation-corrected PET-CT compared with contrast-enhanced computed tomography (CT) in the postoperative patients who suspected recurrence of gastric cancer.

**Materials and Methods:** Fourteen patients who had underwent curative resection due to gastric cancer were enrolled in this retrospective study. Within 1 month, both PET-CT and contrast-enhanced abdomen-and-pelvis CT were performed in all the patients to assess tumor recurrence. Comparison was performed on a region-by-region basis. A final diagnosis was reached by radiological and/or clinical follow up and histopathology with surgery. Diagnostic accuracy in PET-CT and CT alone were evaluated on the basis of the final diagnosis.

**Results:** A total of 168 foci in abdomen, pelvis and bone were assessed. 23 recurrent regions were confirmed by follow-up (n=9) or surgery (n=14). The sensitivity, specificity, positive predictive value, negative predictive value, and accuracy of PET-CT and contrast-enhanced CT alone were 78.3% vs 30.4%, 98.6% vs 97.9%, 90% vs 70%, 96.6% vs 89.8%, and 95.8% vs 88.7%, respectively. Surgery was performed due to obstructive symptom in 4 cases and one metastatic lymphadenopathy in one case. In 4 cases with surgery, micrometastasis in mesentery was detected, but in neither PET-CT nor CT. But other operative findings were equal to sites of FDG uptake in PET-CT.

**Conclusion:** PET-CT is more accurate than contrast-enhanced CT alone in the detection of recurrent gastric cancer and has the clear potential to affect the clinical management in the follow-up of patients with gastric cancer.