

POSITRON EMISSION TOMOGRAPHY IMAGING IN INFLAMMATORY BOWEL DISEASE USING THE RADIOTRACER [¹¹C]GW457427 TARGETING NEUTROPHIL ELASTASE

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Poster

IBD

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A study of 10 IBD patients evaluated the neutrophil elastase-targeting PET tracer [¹¹C]GW457427 combined with MRI, finding it detected 8 of 9 endoscopy-proven lesions and revealed small-bowel lesions inaccessible to standard endoscopy.

KEY POINTS

- Ten patients (5 ulcerative colitis, 5 Crohn's disease) with active IBD underwent PET imaging with [¹¹C]GW457427, a radiolabeled inhibitor targeting neutrophil elastase, a serine protease secreted at inflammation sites.
- PET/MRI with gadolinium contrast (used in 7 patients) provided superior anatomical correlation compared to PET/low-dose CT (3 patients), successfully identifying 8 of 9 endoscopically confirmed lesions.
- The tracer revealed inflammatory lesions in the small intestine that are not accessible to classical endoscopy.
- The authors suggest [¹¹C]GW457427 PET/MRI may serve as a potential non-invasive tool for evaluating active lesions and treatment response and as a biomarker for neutrophil-mediated inflammation in IBD.
- This material is relevant to gastroenterologists and researchers interested in advanced imaging techniques and the role of innate immunity in IBD pathogenesis.

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