

# Sonographic Findings of Superior Mesenteric Nerve Plexus Invasion by Pancreatic Carcinoma

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## Abstract

[Purpose] We aimed to assess the diagnostic performance of transabdominal ultrasonography (US) in identifying superior mesenteric nerve plexus (PL sma) invasion by pancreatic carcinoma. [Subjects and Methods] Ninety-six patients with pancreatic carcinoma who received preoperative US and CT were enrolled. US examinations were performed using Aplio XV/XG/500 (TOSHIBA) with a 3.75-7.5 MHz convex, linear transducer. In US, a low echoic area around the SMA was considered to indicate PL sma invasion. In contrast, in CT, an increase in fat attenuation around the SMA was considered to indicate PL sma invasion. [Results and Discussion] Fifteen patients were diagnosed with pathological PL sma invasion. The sensitivity, specificity, accuracy, positive predictive value, and negative predictive value of US and CT were respectively 53.3% and 60.0%, 92.5% and 90.1%, 86.4% and 85.4%, 52.9% and 57.1%, and 91.4% and 92.4%. The two modalities showed no significant difference in diagnostic accuracy. [Conclusion] Transabdominal ultrasonography showed good diagnostic accuracy in identifying PL sma invasion by pancreatic carcinoma.

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## Keywords

ultrasonography, computed tomography, pancreatic carcinoma, superior mesenteric nerve plexus, PL sma

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