

Evidence Discussion – Exocrine Pancreatic Insufficiency (AB-33.3)

Fecal elastase is the most appropriate initial test for exocrine pancreatic insufficiency (EPI) with a level <100 ug/g of stool providing good evidence of EPI, and levels of 100-200 ug/g being indeterminate for EPI. It is an indirect measurement that is simple, noninvasive, and relatively non-expensive. While direct measurements of pancreatic secretions in to the duodenum are accurate, they are invasive, time-consuming and a more significant burden to the patient than this indirect test.

Quantitative fecal fat testing is generally not practical for routine clinical use.

While cross-sectional imaging methods such as CT and MRI/MRCP cannot be used to solely identify EPI, they play an important role in the diagnosis of both benign and malignant pancreatic disease, and can also identify gross pancreatic structural changes. Cross-sectional imaging is thus useful for diagnosing underlying pancreatic disease as well as abnormalities that may support an EPI diagnosis.

EPI develops in more than half of patients with chronic pancreatitis, 27-62% of patients with relapsing acute pancreatitis, 85% of patients with cystic fibrosis, and 50-92% of patients with unresectable pancreatic ductal adenocarcinoma. It is seen in 40-50% of patients with resectable pancreatic ductal adenocarcinoma before treatment and 65% after treatment. It should thus be suspected in these patients.

References:

1. Whitcomb DC, Buchner AM, Forsmark CE. AGA clinical practice update on the epidemiology, evaluation, and management of exocrine pancreatic insufficiency: expert review. *Gastroenterology*. 2023;165(5):1292-1301. doi:10.1053/j.gastro.2023.07.007. Epub 2023 Sep 20. PMID: 37737818.
2. Nikfarjam M, Wilson JS, Smith RC. Australasian Pancreatic Club Pancreatic Enzyme Replacement Therapy Guidelines Working Group. Diagnosis and management of pancreatic exocrine insufficiency. *Med J Aust*. 2017;207(4):161-165. doi:10.5694/mja16.00851. PMID: 28814218.