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What is the diagnostic accuracy of CT and abdominal ultrasound in the diagnosis of alcohol-related chronic pancreatitis?

Bibliographic reference	Study type	Evidence level	Number of patients	Prevalence	Patient characteristics	Type of test	Reference standard	Sensitivity and specificity	Positive and Negative predictive value	Source of funding	Additional comments
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Buscaill L, Escourrou J, Moreau J et al. Endoscopic ultrasonography in chronic pancreatitis: a comparative prospective study with conventional ultrasonography, computed tomography, and ERCP. <i>Pancreas</i> . 1995; 10(3):251-257. Ref ID: 143	Prospective case series	1b	N=81	44/81 diagnosed with chronic pancreatitis	Chronic pancreatitis With calcifications: male:female 22:2, mean age 48 yrs, clinical symptoms: abdominal pain and/or weight loss 22/24 Alcohol aetiology 24/24 Without calcifications: With calcifications: male:female	Abdominal ultrasound (AUS) CT	Diagnosis is based on clinical, biochemical and CT, AUS, endoscopic ultrasonography and endoscopic retrograde cholangiopancreatography (ERCP)	AUS Sensitivity 58% specificity 75% CT 75% and 95% respectively	NR	NR	Examinations performed blind

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					17:3, mean age 47 yrs, clinical symptoms: abdominal pain and/or weight loss 16/20, pain and jaundice 2/20, alcohol aetiology 20/20						
Rosch T, Schusdziarra V, Born P et al. Modern imaging methods versus clinical assessment in the evaluation of hospital in-patients with suspected pancreatic disease. <i>American Journal of Gastroenterology</i> . 2000; 95(9):2261-2270. Ref ID: 2558	Retrospective case series	1b	N=184	53/184 (29%) CP without focal inflammatory mass; 18/184 (10%) CP with inflammatory mass 77/184 pancreatic malignancy (42%)	Inpatients referred for suspected pancreatitis Male:female 111:73, mean age 56 yrs	Clinical assessment (laboratory findings plus ultrasound) CT	Surgery, histology and cytology plus information from one year follow-up	Pancreatic disease versus normal pancreas Clinical assessment (laboratory values and ultrasound results) sensitivity 94%	NR	NR	Examination and interpretation performed blind (CT by three different examiners)

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								vs specificity 35%			
								CT 91 vs 78% respectively			
								Clinical assessment plus CT 86 vs 81% respectively			
Swobodnik W, Meyer W, Brecht K. Ultrasound, computed tomography and endoscopic retrograde cholangiopancreatography in the morphologic diagnosis of pancreatic disease. <i>Klinische Wochenschrift</i> . 1983; 61(6):291-296. Ref ID: 2555	Prospective case series	1b	N=75	27/75 (36%) chronic pancreatitis	Patients referred for ERCP with suspected pancreatitis Male:female 42:33, mean age 49 yrs	US CT	73% laboratory data, functional tests and morphological imaging and 6 month to 1 yr follow-up 27% final	Chronic pancreatitis Ultrasound specificity 100% sensitivity 52% CT 98% and 74% respectively	NR	NR	Examination and interpretation blind

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- [1] *Bibliographic reference*: author, title, journal, volume, year, pages.
- [2] *Study type*: observational, cohort, case studies, etc.
- [3] *Evidence level*: classified using levels of evidence for studies of diagnostic test accuracy.
- [4] *Number of patients*: total number of patients included in the study, with inclusion/exclusion criteria.
- [5] *Prevalence*: proportion of people with the disease in the population at risk.
- [6] *Patient characteristics*: relevant characteristics to the area of interest: age, sex, ethnic origin, comorbidity, disease status, community/hospital based.
- [7] *Type of test*: description of the test used in the study.
- [8] *Reference standard*: reference standard used as measure of outcome. Specify if it is a 'gold' standard or 'current best practice'.
- [9] *Sensitivity*: proportion of individuals classified as *positive* by the gold (or reference) standard, who are correctly identified by the study test. *Specificity*: proportion of individuals classified as *negative* by the gold (or reference) standard, who are correctly identified by the study test.
- [10] *Positive predictive value*: proportion of individuals with a positive test result who actually have the disease. *Negative predictive value*: proportion of individuals with a negative test result who do NOT have the disease.
- [11] *Source of funding*: government funding (for example, NHS), voluntary charity (for example, Wellcome Trust), pharmaceutical company.
- [12] *Additional comments*: additional characteristics/interpretations of the studies. Important flaws in the study not identifiable from other data in the table. A range of additional questions or issues that will need to be considered, but do not figure in the results table – for example, if a test is one of a sequence of tests, if its utility was determined.

Table 7.2 Levels of evidence for studies of the accuracy of diagnostic tests. Adapted from 'The Oxford Centre for Evidence-based Medicine Levels of Evidence' (2001) and the Centre for Reviews and Dissemination 'Report Number 4' (2001).

Levels of evidence	Type of evidence
Ia	Systematic review (with homogeneity) ^a

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	of level-1 studies ^b
Ib	Level-1 studies ^b
II	Level-2 studies ^c Systematic reviews of level-2 studies
III	Level-3 studies ^d Systematic reviews of level-3 studies
IV	Consensus, expert committee reports or opinions and/or clinical experience without explicit critical appraisal; or based on physiology, bench research or 'first principles'
<p>^a Homogeneity means there are no or minor variations in the directions and degrees of results between individual studies that are included in the systematic review.</p> <p>^b Level-1 studies are studies:</p> <ul style="list-style-type: none"> • that use a blind comparison of the test with a validated reference standard (gold standard) • in a sample of patients that reflects the population to whom the test would apply. <p>^c Level-2 studies are studies that have only one of the following:</p> <ul style="list-style-type: none"> • narrow population (the sample does not reflect the population to whom the test would apply) • a poor reference standard (defined as that where the 'test' is included in the 'reference', or where the 'testing' affects the 'reference') • a comparison between the test and reference standard that is not blind • case-control design. 	

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^d Level-3 studies are studies that have **at least two or three** of the features listed for level-2 studies.