

Mayo Clinic AI Spots Pancreatic Cancer on Routine CT Scans Up to 3 Years Before Diagnosis

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The infographic features a dark blue background with a grid pattern and a faint line graph in the top right corner. The main title is in large white and teal text. Below the title is a subtitle in white. Three key statistics are presented in separate boxes with vertical bars on the left: 73% (orange bar), 475 days (yellow bar), and 3x (blue bar). The date 'May 14, 2026' is at the bottom left, and the 'ToKnow.ai' logo is at the bottom right.

Mayo Clinic AI Spots Pancreatic Cancer 3 Years Early

REDMOD detects invisible tumors on routine CT scans before symptoms appear

- 73%** Hidden cancers caught by AI (vs 39% by humans)
- 475 days** Median lead time before clinical diagnosis
- 3x** Better than radiologists at detecting cancer >2yr out

May 14, 2026

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Researchers at Mayo Clinic built REDMOD, an AI model that identifies pancreatic cancer on routine abdominal CT scans up to three years before clinical diagnosis. [Published](#) in the journal Gut on April 28, the study validated the model on 493 CT scans from multiple

institutions, including 63 from patients later diagnosed with pancreatic cancer. Every one of those scans had originally been read as normal by radiologists. REDMOD caught 73% of those hidden cancers at a median lead time of about 16 months, nearly double the 39% rate of board-certified radiologists reviewing the same images. For scans taken more than two years before diagnosis, the advantage grew to nearly threefold (68% vs 23%). The model works by automatically segmenting the pancreas, extracting hundreds of texture features that capture subtle tissue changes invisible to the human eye, and feeding them into an ensemble of three classifiers.

Pancreatic cancer kills because it hides. Over 85% of patients are diagnosed after the disease has spread, and [five-year survival sits at roughly 13.7%](#). There is no routine screening test. REDMOD runs on standard CT scans that patients already get for unrelated reasons, so deployment would not require new imaging hardware or extra appointments. If doctors could be alerted years earlier, patients could reach surgery while the tumor is still removable. The model also showed 90-92% consistency across repeat scans, making it viable for ongoing monitoring of high-risk patients.

REDMOD reads invisible tissue-level changes rather than visible masses, redefining what “detection” means for this cancer. The bottleneck is no longer whether AI can find the signal, but whether hospitals and regulators can build the clinical workflows to act on it. Mayo Clinic’s prospective [AI-PACED trial](#) is the next step.

Sources:

- [Mukherjee et al., “Next-generation AI for visually occult pancreatic cancer detection,” Gut \(BMJ\), April 2026](#)
- [Mayo Clinic News Network: AI detects pancreatic cancer up to 3 years before diagnosis](#)
- [NCI SEER Cancer Stat Facts: Pancreatic Cancer](#)

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