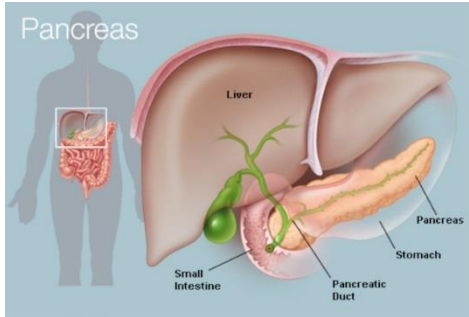


An Endoscopic 3-D OCT Imaging System for Detection of Early Stage Pancreatic Cancer

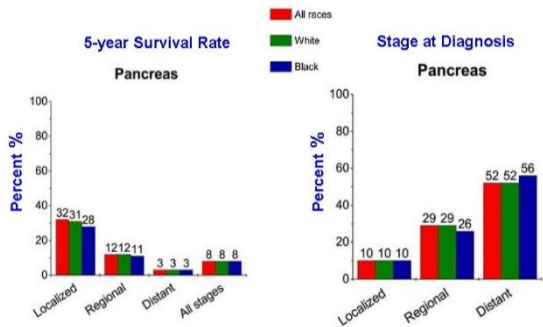
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Pancreatic Cancer



5 year survival rate: < 7%
Survival time: < 12 months

5-year Survival Rate Stage at Diagnosis



Cancer Statistics, 2018

CT, MRI, PET-CT, Ultra-Sound ?
Resolution: ~ 1 to 5 mm



Optical Coherence Tomography (OCT)

Resolution: ~ μm

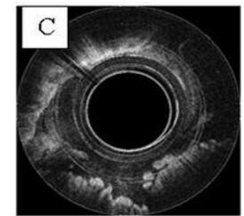
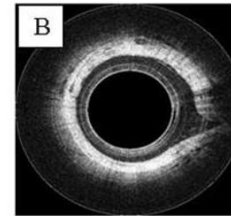
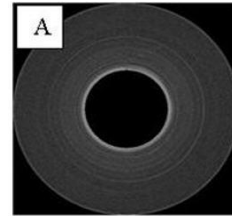
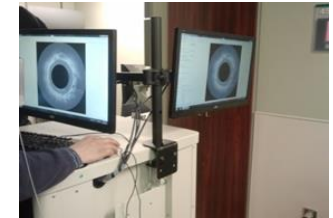
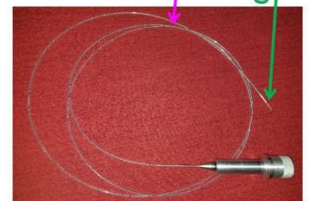
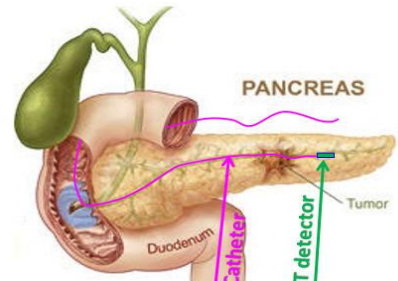
OCT and Laser Radar

Low Coherence Interferometry

Detected OCT Signal

95% Pancreatic cancers arising from the ducts

Endoscopic OCT imaging?



Background signal

Normal pancreas duct

Cancer growing under the surface of pancreas duct