

MEDICAL BREAKTHROUGHS

RESEARCH SUMMARY

TOPIC: NANOKNIFE TREATS PANCREATIC CANCER
REPORT: MB #4973

BACKGROUND: According to the American Society of Clinical Oncology, pancreatic cancer is the fourth most common cause of cancer death in the United States. It occurs when a cell in the pancreas is damaged, causing it to start growing out of control. The risk of developing pancreatic cancer increases with age, with about two-thirds of patients being diagnosed at age 65 or older. There are slightly more men than women affected by pancreatic cancer. One of the biggest risk factors is cigarette smoking. Like most cancers, early detection of is critical. Survival rates are impacted by tumor size and whether the cancer has spread to other organs.
(Source: <https://www.hopkinsmedicine.org/health/conditions-and-diseases/pancreatic-cancer>)

SIGNS AND SYMPTOMS: Pancreatic cancer is often referred to as a silent disease because it typically doesn't show any signs and symptoms in its beginning stages. Doctors usually can't feel or detect an early tumor during a routine physical because the pancreas is buried deep in the abdomen and sits behind the stomach, small intestine, liver, spleen, gallbladder, and bile ducts. So, if a tumor develops, it may not be noticed until it's grown large, and by the time symptoms begin, the cancer may have spread to other parts of the body. The most common symptom is jaundice, or a yellowing of the skin and the whites of the eyes, which is caused by an excess of bilirubin made by the liver. Sudden weight loss is also a common early warning sign of pancreatic cancer. Other symptoms of cancer of the pancreas include dark-colored urine, itchy skin, digestive problems, pain in the upper abdomen, appetite loss, blood clots, and diabetes.
(Source: <https://www.cancercenter.com/cancer-types/pancreatic-cancer/symptoms>)

EXCITING POTENTIAL WITH NANOKNIFE: By the time pancreatic cancer reaches stage 3, it is often too advanced to be able to remove surgically. The average life expectancy after diagnosis of stage 3 is about nine to 15 months. However, advances in technology may be changing that with something called the NanoKnife. "Thus far, we're seeing studies that using the NanoKnife virtually doubles life expectancy for pancreatic cancer patients," said Tom Cox, director of Radiology, Radiation Oncology and OSF Cancer Services at OSF Saint Francis. The NanoKnife probes are placed around the tumor with image guidance and deliver a series of high voltage pulses to cancerous cells. Rather than burning or freezing, like the thermal ablation probes, the NanoKnife pulses punch holes through the cell membranes. The key is being able to target the diseased cells and minimize peripheral damage. Cox continued, "This is another option we can show and give them another chance to live longer – and maybe the chance to live a lot longer."
(Source: <https://www.osfhealthcare.org/blog/nanoknife-exciting-potential-in-cancer-treatment/>)

FOR MORE INFORMATION ON THIS REPORT, PLEASE CONTACT:

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com