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# Pancreatic cancer can now be detected early on

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**Pancreatic cancer can now be detected early on**




Currently, no diagnostic tools are available for detecting pancreatic cancer at an early stage which either leads to unnecessary surgery or untreated malignancy. As a result, pancreatic cancer has the lowest survival rate in comparison to all major cancers.

A team led by Lev T. Perelman, PhD, Director of the Center for Advanced Biomedical Imaging and Photonics at Beth Israel Deaconess Medical Center (BIDMC), has come up with a new, minimally invasive technique for identifying pre-cancerous and cancerous pancreatic lesions.

This new tool works on the principle of light scattering spectroscopy (LSS). It can be used for detecting the structural changes occurring within the pre-cancerous or cancerous cells by bouncing light off tissues and analyzing the reflected spectrum.

Perelman, who is also Professor of Medicine and Professor of Obstetrics, Gynecology and Reproductive Biology at Harvard Medical School, adds that not all pancreatic lesions are cancerous. A specific diagnostic tool is required to accurately identify the pancreatic cysts that need surgical intervention and those that do not.

High definition scanning technologies such as MRI and CT imaging are being used for detecting pancreatic cysts but they provide very limited information about the cysts' malignancy.

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Cytology is the only preoperative test currently used for identifying malignancy but it has only 58 percent accuracy. The experiments done by Perelman and his team show that LSS techniques is able to achieve 95 percent accuracy for detecting malignancy.

Co-lead author Douglas K. Pleskow, MD, Clinical Chief of the Division of Gastroenterology and Director of the Colon and Rectal Cancer Program at the Cancer Center at BIDMC, feels that this new technology has a high level of precision in

distinguishing between harmless pancreatic cysts and those with malignant potential.

The accuracy posed by the LSS system needs to be further analyzed using post-operative tissues. This new technique has the potential to serve as a major advance against pancreatic cancer.