
Pancreatic Cancer: MRI Protocol for High-Risk Patients



A magnetic resonance imaging (MRI)-based screening programme for individuals at high risk of pancreatic cancer detected pancreatic lesions in 16 of 40 (40 percent) of patients, of whom five underwent surgery, according to a study published online in *JAMA Surgery*.

"An MRI-based protocol for the surveillance of individuals at risk for developing pancreatic cancer seems to detect cancer or premalignant lesions with good accuracy," say Marco Del Chiaro, MD, PhD, of the Karolinska Institute, Stockholm, Sweden, and co-authors.

Participants in the study included 24 women and 16 men with an average age of nearly 50. In 38 of the patients, increased risk of the disease was based on family history of pancreatic cancer. BRCA2, BRCA1 and p16 gene mutations were identified in some patients. The average study follow-up was 12.9 months, with MRI screening repeated after one year if the initial screen was negative or at six months if there were unspecific findings or findings that did not indicate surgery.

Analysis of short-term results from the MRI-based screening programme revealed that MRIs found a pancreatic lesion in 16 patients (40 percent): intraductal papillary mucinous neoplasia, which can become invasive cancer, in 14 patients (35 percent) and pancreatic ductal adenocarcinoma in two patients (5 percent).

In addition, five patients (12.5 percent) required surgery: three for pancreatic ductal adenocarcinoma and two for intraductal papillary mucinous neoplasia. The remaining 35 continue under surveillance.

"The exclusive use of MRI can reduce costs, increase availability and guarantee the safety of the individuals under surveillance compared with protocols that are based on more aggressive methods," explain Dr. Del Chiaro and colleagues.

The researchers note that, given the small number of participants and the divergent results, their study did not allow evaluation of the efficacy of MRI as a single screening modality.

In a related commentary, Mark S. Talamonti, MD, of the NorthShore University HealthSystem, Evanston, Illinois, writes: "Pancreatic cancer is diagnosed in only 10 percent of patients with syndromic risk factors or a family history of pancreatic cancer. The other 90 percent are considered sporadic cancers with no currently known risk factors. And that is the real challenge for the future of early detection of pancreatic cancer. In current clinical practice, no biomarkers exist for diagnosing early-stage disease."

Population screening with radiographic imaging or endoscopic procedures, according to Dr. Talamonti, makes no clinical or economic sense for a cancer that represents only three percent of estimated new cancers each year.

"However, with an aging population, this most formidable of human cancers will only increase in incidence and frequency. There is a clear and unequivocal need for affordable screening strategies based on reliable biomarkers and efficient imaging modalities," he says.

Source: [JAMA](#)

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