Austin Pancreatic Disorders

Open Access

Austin Publishing Group

Short Communication

Should we Screen for Pancreatic Cancer?

Vargas-Flores E*, Quintana-Cortez JC, Hernández JLB and Bevia-Pérez F
Paseos de Chulavista, Nogales, Sonora, México

***Corresponding author:** Vargas-Flores E, Paseos de Chulavista, Nogales, Sonora, México

Received: May 26, 2017; **Accepted:** June 06, 2017; **Published:** June 13, 2017

Short Communication

Pancreatic cancer is a highly devastating disease which (when early and properly diagnosed) can be curable with surgical resection. Nevertheless, most of the patients with pancreatic cancer have unrespectable disease at the time of diagnosis. So, this raises a very interesting question. Who should we screen for pancreatic cancer?

A positive family history or known pancreatic cancer associated genetic syndromes are high risk factors to develop pancreatic cancer. Thus, these high risk individuals can be a potential target for screening programs [1,2].

Some studies have been run to determine the diagnostic yield of screening programs for pancreatic cancer in high risk groups ranging from 3.9 to 50% with varying results [3,4].

The age to initiate a screening process is yet to be determined, even in the face of a high risk individual (Table 1). For patients with hereditary pancreatitis a consensus conference recommended that screening should be offered to patients who are at least 40 years of age [5]. Patients with Peutz-Jeghers syndrome should begin screening earlier, at about 30 years of age because of younger age of onset of pancreatic cancer. For high risk patients with familial pancreatic cancer, starting screening at age 50 is recommended [6].

Genetic markers for pancreatic cancer in pancreatic juice and/or pancreatic cyst fluid may improve early diagnosis of and screening for high risk lesions that are not detectable by imaging, thus improving identification of lesions that require surgery [7].

Endoscopic ultrasound guided fine needle aspiration (EU-FNA) allows sampling of the pancreatic cyst fluid and cyst wall, which can be sent for a range of test (including molecular testing).

Table 1: High risk individuals for pancreatic cancer screening.

Individuals with 3 or more affected blood relatives with pancreatic cancer, including at least 2 related by first degree (familial pancreatic cancer), with at least one of the affected related to the at-risk relative by first degree (parent, sibling, child)
Individuals with at least 2 affected first degree relatives with pancreatic cancer
All patents with Peutz-Jeghers syndrome should be screened, regardless of family history of pancreatic cancer
P16 (CDKN2A) gene mutation carriers with 1 affected first degree relative
BRCA2 gene mutation carrier with 1 affected first degree relative
BRCA2 gene mutation carriers with 2 affected family members (no firs degree relative) with pancreatic cancer
PALB2 gene mutation carriers with 1 affected first degree relative
ATM gene mutation carriers
Mismatch repair gene mutation carriers (Lynch syndrome) with one affected first degree relative.

The cost effectiveness of this clinical approach varies widely. Some studies have shown that screening would cost up to $35000 per life saved. There still lack of data using a biochemical approach using CA 19-9 as a screening tool which could be useful and "cheap" as well [8,9].

When finding a pancreatic lesion in asymptomatic high risk individuals, a decision must be made on whether we should keep on observation or consider surgery. The latter approach is not fully recommended [10]. Even though it may sound logic, asymptomatic high risk individuals without pancreatic lesions should not be put through prophylactic pancreatoduodenectomy since even in high volume centers morbidity and mortality related to this procedure is relatively high. There should be an individual approach based on the features found in imaging studies since solid lesions tend to be more ominous than cystic ones. In asymptomatic high risk individuals with suspected branch duct intraductal papillary mucinous neoplasm's surgery can be considered for lesions 2cm or larger, presence of mural nodules or a solid component within. The patient with a cystic mass without worrisome features of high grade dysplasia or malignancy should be monitored with imaging after 6 to 12 months [6].

Pancreatic cancer screening should be taken into account in every general and oncology surgery service since families with patients suffering pancreatic cancer are not usually put through surveillance and high volume centers make it difficult to consider asymptomatic individuals on a screening program. High risk individuals have to be clearly identified and keep an eye on until we make sure they are out of danger from this disastrous malignancy.

References

1. Klein AP, Brune KA, Petersen GM, Goggins M, et al. Prospective risk of pancreatic cancer in familial pancreatic cancer kindreds. Cancer Res. 2004; 64: 2634-2638.
2. Schneider R, Slater EP, Sina M, Habbe N, Fendrich V, Matthäi E, et al. German national case collection for familial pancreatic cancer (FaPaCa): ten years experience. Fam Cancer. 2011; 10: 323-330.
3. Al-Sukhni W, Borgida A, Rothenmund H, Holter S, Semotiuk K, et al. Screening for pancreatic cancer in a high-risk cohort: an eight-year experience. J Gastrointest Surg. 2012; 16: 771-783.
4. Brentnall TA. Pancreatic cancer surveillance: learning as we go. Am J Gastroenterol. 2011; 106: 955–956.
5. Ulrich CD, Consensus Committees of the European Registry of Hereditary Pancreatic Diseases, Midwest Multi-Center Pancreatic Study Group, International Association of Pancreatology. Pancreatic cancer in hereditary pancreatitis: Consensus guidelines for prevention, screening and treatment. Pancreatology. 2001; 1: 416–422.
6. Canto MI, Harinck F, Hruban RH, Offerhaus GJ, Poley JW, et al. International Cancer of the Pancreas Screening (CAPS) Consortium summit on the management of patients with increased risk for familial pancreatic cancer. Gut. 2013; 62: 339-347.
7. Springer S, Wang Y, Dal Molin M, Masica DL, Jiao Y, et al. A combination

Citation: Vargas-Flores E, Quintana-Cortez JC, Hernández JLB and Bevia-Pérez F. Should we Screen for Pancreatic Cancer?. Austin Pancreat Disord. 2017; 1(2): 1007.

of molecular markers and clinical features improve the classification of pancreatic cysts. Gastroenterology. 2015; 149: 1501-1510.

8. Latchford A, Greenhalf W, Vitone LJ, Neoptolemos JP, et al. Peutz-Jeghers syndrome and screening for pancreatic cancer. Br J Surg. 2006; 93: 1446-1455.

9. Rulyak SJ, Kimmey MB, Veenstra DL, Brentnall TA. Cost-effectiveness of pancreatic cancer screening in familial pancreatic cancer kindreds. Gastrointest Endosc. 2003; 57: 23-29.

10. Canto MI, Hruban RH, Fishman EK, Kamel IR, Schulick R, et al. Frequent detection of pancreatic lesions in asymptomatic high-risk individuals. Gastroenterology. 2012; 142: 796-804.

Citation: Vargas-Flores E, Quintana-Cortez JC, Hernández JLB and Bevia-Pérez F. Should we Screen for Pancreatic Cancer?. Austin Pancreat Disord. 2017; 1(2): 1007.