

Outcomes of a high-risk pancreas cancer screening program in a community cancer center

Background

- Certain individuals harbor a much higher risk of developing pancreas cancer based on family history or genetic variants and screening these high-risk individuals (HRI) with abdominal imaging appears to be beneficial.
- Mary Bird Perkins Cancer Center started the first pancreas cancer screening program (PCSP) in Louisiana in 2016.

Objective

- The goal of this study was to review outcomes of this program since its inception.

Methods

- We reviewed a prospective database of all HRI referred to our PCSP between September 2016-April 2020.
- Variables of interest included demographics, diagnosis, treatment, and identification of pancreatic lesions.

Results

Table 1. Demographics of patients that met criteria.

	All Criteria Patients (%)
Total No of Patients	35
No of Criteria patients	8 (23)
Age of criteria patients	
Mean Age	50 (range 31-76)
Age <50	5 (62)
Age >50	3 (38)
Gender of criteria patients	
Male	3 (38)
Female	5 (62)
Family history of pancreas cancer in criteria patients	
Yes	7 (87)
No	1 (13)
Germline mutation of criteria patients	
Yes	5 (62)
No	3 (38)
MRI Ordered for criteria patients	
Yes	8 (100)
No	0(0)
EUS Ordered for criteria patients	
Yes	3 (38)
No	5 (62)

Figure 1. Number of new and criteria patients by year.

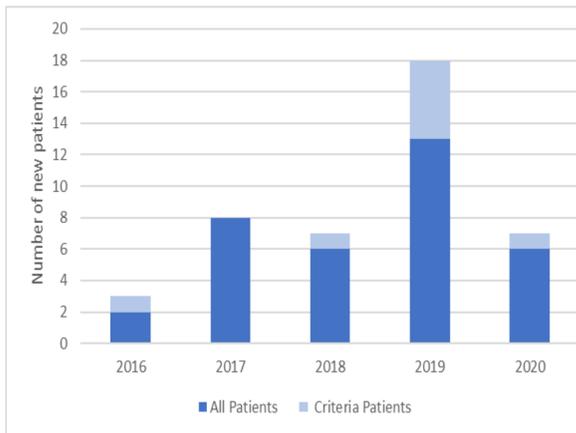


Figure 2. Germ-line mutations in patients that met criteria for screening.

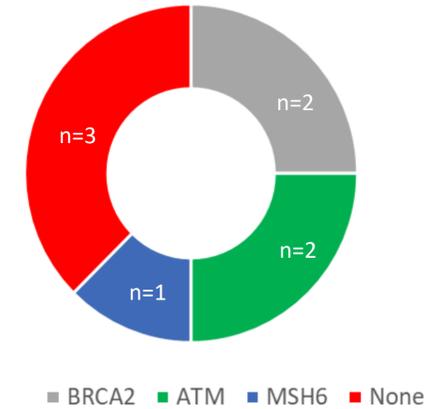
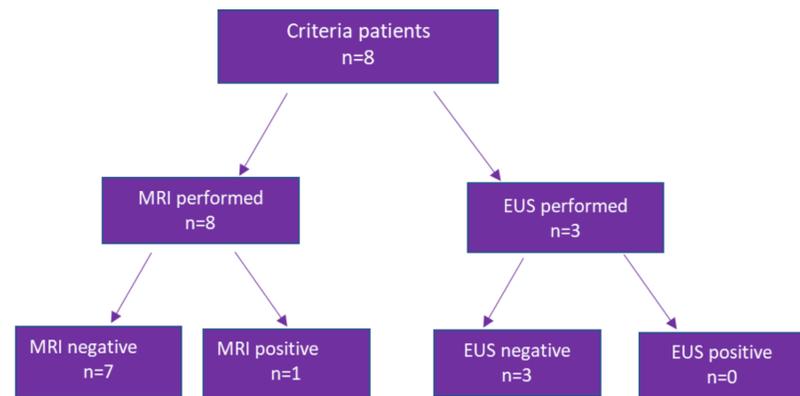


Table 2. Number of patients seen with a given predisposition syndrome.

Predisposition Syndrome	Lifetime Risk (%)	Number of Patients Seen
Familial Atypical multiple mole and melanoma syndrome	17	0
Peutz-Jeghers	36	0
Hereditary nonpolyposis colorectal cancer with FDR	3.7	1
Familial adenomatous polyposis	~2	0
Hereditary Pancreatitis	40	0
Familial Pancreatic Cancer BRCA with 2 FDRs	8-12	2
Familial Pancreatic Cancer—ATM with 2 FDRs	8-12	0
Familial of Pancreatic Cancer with 3 FDRs	16-30	1
Hereditary Breast Ovarian Cancer—BRCA 1	1.5-2.1	0
Hereditary Breast Ovarian Cancer—BRCA 2	3.6	2

Figure 3. Results of abdominal imaging done in criteria patients.



Summary

- Pancreatic cancer is the third most deadly malignancy in the United States.
- Despite advances in treatment, the five-year survival prognosis remains poor.
- Screening HRI may provide an opportunity to intervene in this disease at an earlier stage, offering more patients life saving treatments.

Conclusion

- Most people referred to our PCSP did not actually meet criteria as HRI. In the first few years of this PCSP, the yield of screening this younger population has been minimal.
- We expect this will improve with time, with a larger sample size, and longer follow up.

References

Torphy, Robert J., and Richard D. Schulick. "Screening of Patients at Risk for Familial Pancreatic Cancer." *Surgical Clinics of North America*, vol. 98, no. 1, 2018, pp. 25–35., doi:10.1016/j.suc.2017.09.003.