Conclusion: Our study supports more conservative use of imaging in IPMN surveillance. This is warranted given the extended months of follow-up, number of imaging studies, and a majority of outcomes showing no change or minimal growth. With more conservative use of imaging, costly follow-up procedures, including ERCP, biopsy, and surgery, and adverse effects of radiation can be avoided. We recommend further studies across training sites to improve surveillance guidelines to be both cost effective and maintain quality patient care.

Clinical Impact of Pancreatic Cancer Screening for High-Risk Individuals Including BRCA2 Mutation Heterozygotes and Bayesian Analysis via PancPro

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Introduction: Pancreatic cancer (PC) is the fourth most common cause of cancer-related deaths in Western countries. High-risk individuals (HRI) have ≥5% lifetime risk of PC due to strong family history (FMH) and/or genetic mutation(s) compared to 1.3% risk in sporadic cases. Traditional HR1 screening programs have highly variable diagnostic yields. Optimal combination and frequency of imaging to identify premalignant/early-stage, resectable PC remains unclear.

Methods: At our institution all HRI were identified through PC risk assessment with genetic counseling/testing and by multidisciplinary clinical team including gastroenterologists and oncologists. In contrast to CAPS3 protocol, patients with BRCA2+ mutation irrespective of family history were considered high-risk individuals. Bayesian analysis via PancPro was performed in patients with FMH of pancreatic cancer if no mutation was identified. Screening modalities alternated between endoscopic ultrasoundography (EUS) and magnetic resonance imaging (MRI). If abnormal imaging identified, multidisciplinary forum performed for consensus review and recommendations.

Results: During 2015-2018, 54 HRI were identified. Twenty-five HRI opted and completed screening thus far. Of screened individuals, 19/25 (76%) opted to pursue EUS as initial screen, while 6/25 (24%) underwent MRI as index screening procedure. Overall, significant findings were noted in 3/25 (12%) individuals, all of whom had EUS. Significant findings included 2 IPMN cases and 1 patient with pancreatic adenocarcinoma; all 3 were BRCA2+ and were of Ashkenazi Jewish ancestry, one had PC FMH reported in second-degree relative.

Conclusion: Our screening model acknowledges FMH limitations and identifies HRI through comprehensive literature search, Bayesian analysis, with annual surveillance application. We identified an abnormal finding in 3/25 (12%) HRI, all of whom would have been missed via CAPS3 consensus statements. Further studies to incorporate biomarkers and lesion characterization and management are warranted.