ONCOLOGY PRECISION MEDICINE FOR HEPATOBILIARY AND PANCREATIC CANCER: INSIGHTS AND UPDATES FROM A LARGE COMMUNITY HEALTH SYSTEM

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PROBLEM

Are we performing precision medicine testing early enough in a patient's (pts) course to begin therapy in an efficient manner and make an impact on progression free survival?

BACKGROUND

Oncology precision medicine (OPM) continues to grow exponentially. Hepatobiliary cancers - hepatocellular carcinoma (HCC), intra or extrahepatic cholangiocarcinoma (I/EC), and gallbladder carcinoma (GB) - and pancreatic adenocarcinoma (PC) do have actionable alterations (AA).[1-3] The importance of testing early in a patient's course to identify oncology precision medicine (OPM) options could be paramount for progression free survival (PFS).

OBJECTIVE

The purpose of this study was to analyze our rates of actionable mutations in HCC, I/EC, GB and PC and evaluate the timing of precision medicine testing within this subset of pts treatment course.

METHODS

We identified pts with HCC, IC, EC, GB or PC in our OPM database since the centralization of our system. Pts who underwent molecular panel testing had AA's identified and stratified by cancer type. Treatment course for BRAF mutated pts was analyzed using swimmer plots.

FIGURE 1- OPM TESTING RATES BY YEAR

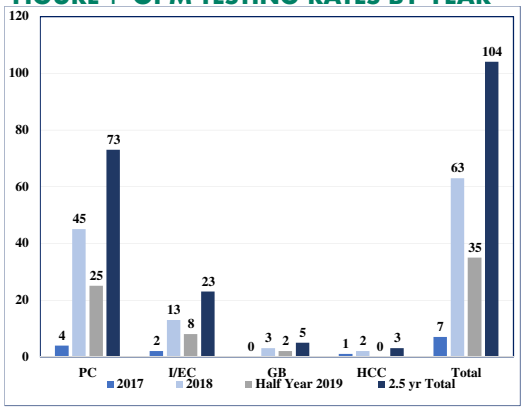

Figure 2- SWIMMER PLOT TREATMENT COURSE FOR PATIENTS WITH BRAF MUTATION

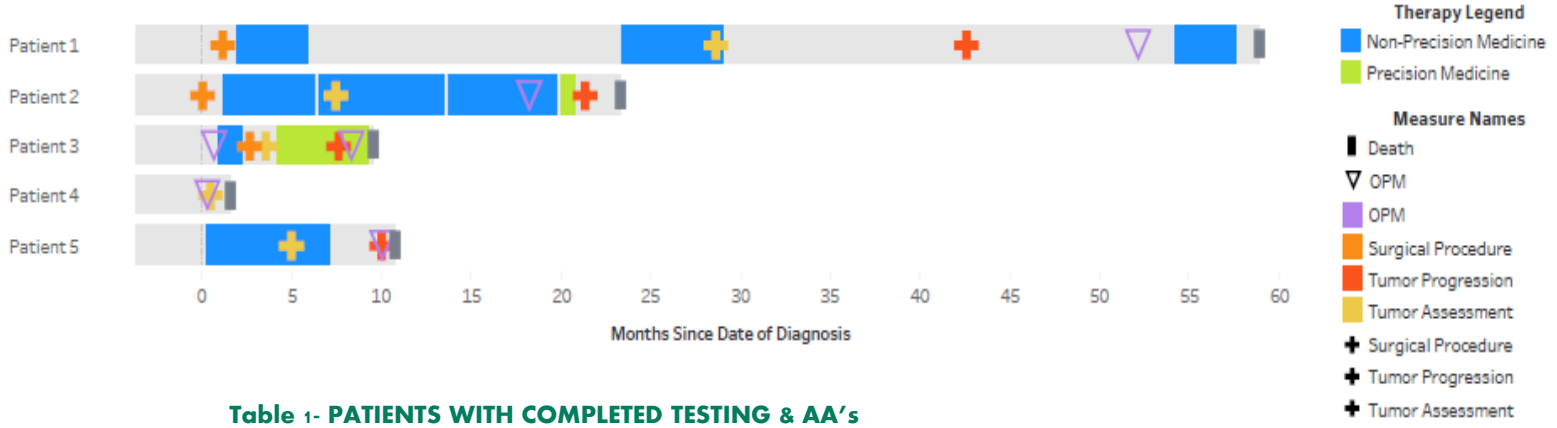

Table 1- PATIENTS WITH COMPLETED TESTING & AA's

Completed Testing	N = Number of Pts	Percentage (%)
PC Pts	63/88	71.6 %
GB Pts	5/88	5.7 %
HCC Pts	2/88	2.3 %
I/EC Pts	18/88	20.4%
BRAF Mutation Pts	5/88	5.7 %
PC pts BRCA1/BRCA2 Mutation	3/63	4.8 %
Actionable Alterations	8/88	9.1 %

RESULTS

456pts were diagnosed with HCC, IC, EC, GB or PC. 104/456pts (23%) were ordered for molecular testing (Figure 1) and 88/456pts (19.3%) completed testing: 18/88 (20.4%) I/EC, 2/88 (2.3%) HCC, 5/88 (5.7%) GB, and 63/88 (71.6%) PC. 3/63 (4.8%) PC pts had a BRCA mutation. These pts did not receive targeted therapy. Overall, 5/88pts (5.7%) had a BRAF mutation (2 PC, 2 I/EC, 1GB).

Thus, 8/88 (9.1%) of tested pts became eligible for targeted therapy over their treatment course (Table 1). Of those with a BRAF mutation, only 2/5 pts had OPM testing sent with initial diagnostic workup, and 2/5 eventually began targeted therapy. One had a progression free survival (PFS) of 2.5months while the other discontinued secondary to toxicity (Figure2).

CONCLUSIONS

Our data showed that we are testing a minority of pts with pancreas and hepatobiliary cancers. Of those tested, it may have occurred too late in the course of illness to improve outcomes. Given the potential utility of uncovering potential germline alterations like BRCA1/2 as well as pragmatic AAs including somatic BRCA and BRAF, we are moving to a more systematic evaluation of these pts to capture and respond to these issues.

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