#139-Utilization of A Third-Party Partnership in Tele-genetic Risk Assessment Program in Genitourinary Oncology

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Abstract

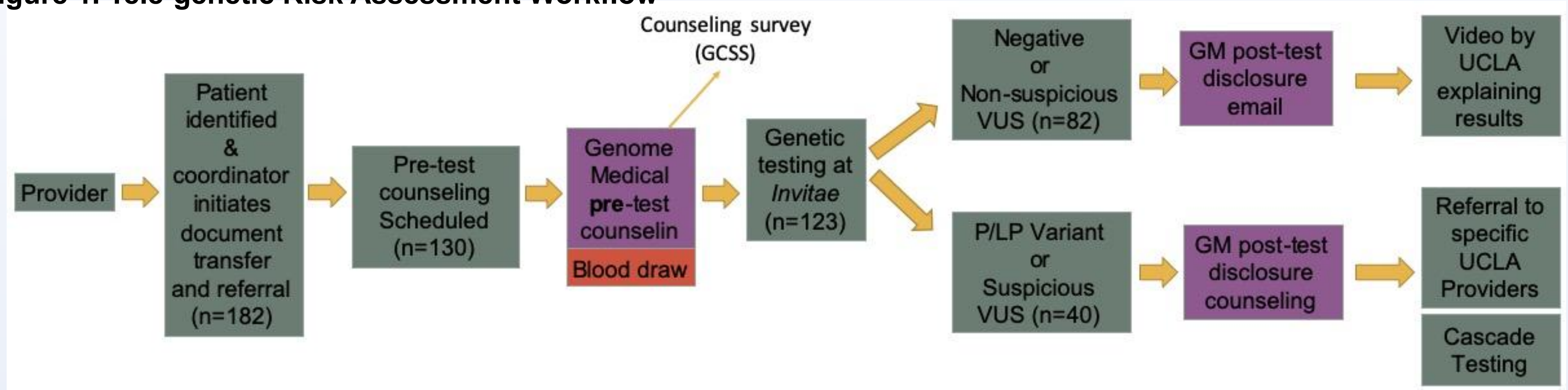
INTRODUCTION: Genetic risk assessment is part of standard clinical care for many urologic cancers. However, genetic testing involves expertise in risk assessment, pre-test counseling, test selection, and results interpretation. With expansion of guidelines and decreased access to genetic counselors, many institutions have been unable to fulfill this clinical need. While telehealth has been applied to genetic counseling with success, an integrated academic/industry tele-genetic model to meet clinical demands has not been described. We established a partnership with a third-party genetic counseling company to create a streamlined workflow that would be both efficient and scalable.

METHODS: Genome Medical (GM) is a third-party company offering multi-lingual genetic counseling throughout the United States with a robust tele-genetic platform. A standardized workflow was established (shown in Figure 1). Between 1/1/20 and 07/01/22, all patients with clinical concern for hereditary genitourinary cancers were referred to a pilot program with GM for all genetic counseling services. Patients were offered telehealth pre-test counseling with GM and when indicated blood draws for genetic testing through a commercial laboratory. Post-test counseling disclosure approach was based on testing results. Testing results and patient satisfaction (via a validated instrument Genetic Counselor Satisfaction Scale (GCSS)) were reviewed. As all non-reimbursed counseling costs were covered, financial aspects were also available for evaluation.

RESULTS: A total of 146 of 182 (80.0%) patients referred agreed to participate, with 130 (89.0%) completing pre-test counseling. Of those, the median age was 66 (range 23-95), with 91% being male and approximately 50% having prostate cancer. The median time from referral to pre-test counseling was 11 days (IQR 7-20). After risk assessment, 127 (97.7%) were recommended for testing of which 123 (96.8%) completed the tests. The median time from testing to result release was 15 days (IQR 10 – 20.8). Forty (32.5%) presented for post-test counseling with the rest having negative disclosures via email. Sixteen percent patients (20/123) had pathogenic findings, 36% (45/123) had variants of unknown significance, and 46% (57/123) had negative results. Reimbursement by private insurers has increased over time, with $17 reimbursed per payor in 2020, $29.3 in 2021, and $52.4 in 2022. Patient satisfaction was high with a mean GCSS of 28, comparable to historic controls.

CONCLUSIONS: Our findings support a hybrid tele-genetic risk assessment program as it provides high patient satisfaction, rapid access to genetic counseling, prompt genetic testing, and timely release of results. Lastly, this approach is broadly scalable across different types of institutions including community settings and across various cancer types.

Figure 1. Tele-genetic Risk Assessment Workflow



Results

Table 1. Patient Demographics

	Number	Percentage
Age (median, range)	66 (23 - 95)	
Sex		
Male	119	91.5%
Female	11	8.5%
Ethnicity		
White	33	25.4%
Asian	8	6.2%
Hispanic	3	2.3%
Middle Eastern	3	2.3%
Black	1	0.8%
Mixed	4	3.1%
Unknown	78	60.0%
Family history of cancer	105	80.8%
Testing Recommended	127	97.7%
Testing Performed	123	94.6%
Type of Test Performed		
Single Gene	2	1.5%
Disease Specific	9	6.9%
Broad Panel	119	91.5%

Table 2. Positive Results From Germline Testing

Gene	Count	Gene	Count	Gene	Count
CHEK2	4	ATM	1	MSH3	1
FLCN	4	BLM	1	MSH6	1
RECQL4	3	BRCA1	1	TSC1	1
MUTYH	3	FH	1	VHL	1
APC	1	MSH2	1		

Table 3. Financial Implication and Reimbursement

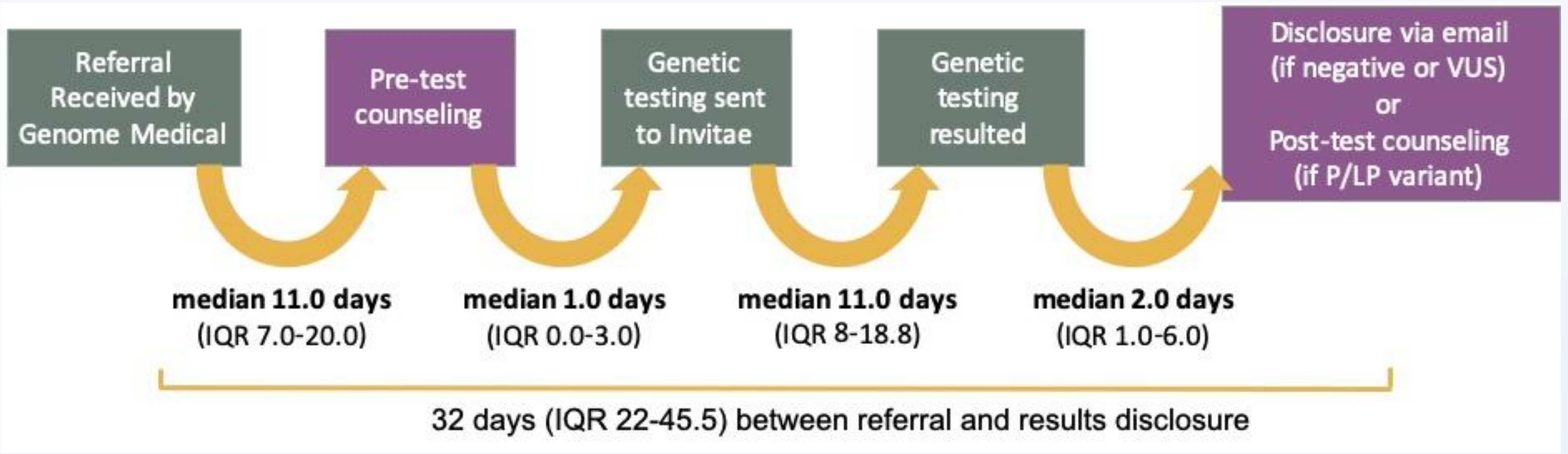
A

Row Labels	Count of Payor	Sum of Amount Covered
2020		
Aetna	1	$ -
ANTHEM BLUE CROSS	1	$ 125.00
Anthem Blue Cross California	8	$ 225.73
Blue Cross Blue Shield	1	$ 54.79
Blue Cross of California	8	$ 84.50
Blue Shield of California	9	$ -
United Healthcare	3	$ -
2021		
Aetna	2	$ -
ANTHEM BLUE CROSS	2	$ -
Anthem Blue Cross of California	13	$ 447.50
Blue Cross of California	2	$ -
Blue Shield of California	18	$ 700.00
Cigna	2	$ 250.00
UCLA MED GRP / HEALTHNET HMO	1	$ -
United Healthcare	13	$ 157.47
2022		
Aetna	2	$ 250.00
Anthem Blue Cross of California	10	$ 276.83
Blue Shield of California	1	$ 125.00
Cigna	1	$ 125.00
LA CARE/ COVERED CALIFORNIA	2	$ -
Undetermined	4	$ 125.00
United Healthcare	2	$ 250.00
Grand Total	**106**	**$ 3,196.82**

B

Year	Count of Payor	Sum of Amount Covered ($)	Amount per Payor ($)
2020	31	534.02	17.2
2021	53	1554.97	29.3
2022	22	1151.83	52.36

Figure 2. Referral Outcomes and Timeline



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