Table S1. Full results from Delphi Survey Means and Rankings (77 Original Concepts + 12 Added Concepts)

Concept	Survey 2 (N=23) Group Mean ± SD	Survey 1 (N=25) Group Mean ± SD	Mode S1	Total ranked in top 5 on S1	Rank #1	Rank #2	Rank #3	Rank #4	Rank #5
What is the condition we are testing for?	***4.91 ±.288***	***4.76 ±.523***	***5***	***23***	***19***	***-***	***-***	***1***	***3***
What results will be returned (generally)?	***4.70 ± .559***	***4.68 ± .557***	***5***	***17***	***2***	***5***	***7***	***3***	***-***
There may be an impact on your personal health through a diagnosis	**4.50 ±.514**	***4.36 ± .810***	***5***	***23***	***13***	***4***	***3***	***1***	***2***
How, if at all, will management be impacted by the results?	***4.43 ±.590***	***4.40 ±.707***	***4***	***15***	***1***	***10***	***2***	***1***	***1***
You may learn the cause of the indication for which testing was done	***4.30 ± .765***	***4.12 ± .881***	***5***	***3***	***-***	***1***	***-***	***1***	***1***
Genetic testing is always voluntary (optional)	***4.22 ±.671***	***4.20 ±.707***	***4***	***12***	***5***	***3***	***1***	***2***	***1***
What other types of results will potentially be returned, and options for choice (such as secondary findings)?	***4.17 ± .650***	***4.04 ± .790***	***4***	***14***	***1***	***2***	***2***	***5***	

A diagnosis may also impact your family (broadly)	**4.00 ± .686**	***4.12 ± 9.27***	***5***	***15***	***1***	***5***	***4***	***4***	***1***
To whom the results will be reported?	***4.00 ± .739***	***4.00 ± .816***	***4***	***10***	***1***	***3***	***3***	***2***	***1***
You may learn unexpected information about family relationships	***3.96 ± .706***	***4.04 ± .790***	***4***	***23***	***8***	***1***	***4***	***6***	***4***
What results does one have the choice to receive or decline?	3.96 ± .665	3.96 ± .735	4	12	5	2	2	1	2
What are the limitations of the test?	3.96 ± .767	3.84 ± .800	4	10	-	-	1	2	7
You have the right not to know about your genetic status	*3.91 ± .996*	***4.04 ± .978***	***5***	***6***	***1***	***1***	***1***	***-***	***3***
We may have information on how to screen/treat some identifiable conditions	3.89 ± .583	***4.16 ± .850***	***4***	***14***	***1***	***8***	***2***	***2***	***1***
For some conditions you may want to personally prepare or change things about your life (education or job plans, reproductive plans)	3.89 ± .900	3.92 ± .862	4	10	2	1	4	-	3
How is the condition treated or managed?	3.87 ± .694	3.8 ± .913	4	2	-	2	-	-	-
GINA and relevant state laws provide some protection	3.87 ± .757	3.76 ± .926	4	19	-	10	3	2	4

There may be more than one disease risk	3.83 ± .834	3.76 ± .926	4	3	-	-	1	-	2
What is the likelihood of discovering cause of primary indication	3.78 ± .671	3.80 ± .707	4	5	-	1	2	2	-
Family members may learn unexpected health information	3.74 ± .689	3.92 ± .862	4	15	2	8	2	-	3
How 'accurate' are these results?	3.74 ± .915	3.84 ± .987	3	8	3	2	1	1	1
Ways variants can be interpreted: pathogenic, benign, VUS	3.74 ± .752	3.76 ± .879	3	7	-	-	*4*	*2*	*1*
We don't yet understand all variants and their impact on disease risk	3.74 ± 1.096	3.72 ± 1.100	4	7	-	-	2	3	2
Variant interpretation may change over time	3.70 ± .974	3.96 ± .841	4	6	-	4	1	1	-
There may be a chance of false positive or false negative result	3.70 ± .974	3.80 ± 1.000	4	5	1	1	2	1	-
Your family may benefit from knowing their personal risks	3.67 ± .594	3.84 ± .850	4	11	1	-	1	7	2
How will the results be reported (phone, in person)?	3.65 ± .982	3.76 ± .831	4	9	-	2	1	5	1
There may be risks for discrimination or stigma (insurance, etc)	3.61 ± .778	3.91 ± .949	4	21	12	5	4	-	-
What types of results will NOT be returned	3.57 ± 1.08	3.60 ± 1.155	4	7	-	-	1	4	2

Degree of risk from results and impact	3.52 ± .898	3.80 ± .957	3	6	1	1	1	1	2
How likely will the test be negative even if the condition is familial (we didn't find the real cause)?	3.52 ± .790	3.56 ± .870	3	4	-	-	1	1	2
How long will it take to receive the results?	3.52 ± .680	3.56 ± .821	3	9	1	2	3	2	9
Differentiating single gene/panel/exome testing (as relevant)?	3.52 ± .665	3.52 ± .963	4	1	-	-	1	-	-
How do you get the sample (e.g. blood, buccal)?	3.52 ± 1.039	3.48 ± 1.122	3	10	5	2	1	1	1
Other tests (more focused or more broad reaching) may (or may not) be available	3.52 ± .790	3.48 ± .872	3	1	-	-	-	-	1
There is a potential risk for genetic discrimination	3.52 ± .790	3.08 ± .997	2	21	8	2	6	3	2
*You may feel that having a specific genetic diagnosis is personally valuable information	3.50 ± 1.043	3.64 ± .907	4	13	3	4	3	-	3
Your family may benefit from knowing their reproductive risks	3.50 ± .618	3.64 ± .810	4	8	-	1	-	-	7
What is the likelihood of other findings (incidental/secondary)	3.48 ± .846	3.56 ± .821	3	2	-	-	1	-	1

How will reinterpreted results be returned to the patient/client?	3.48 ± .947	3.56 ± 1.121	4	1	-	-	1	-	-
Sometimes we will not be certain about the potential benefits	3.48 ± .982	3.44 ± 1.083	3	0	-	-	-	-	-
Your family may have positive health impacts from this test	3.44± .616	3.72 ± .792	4	7	1	-	1	3	2
It could be hard to learn about unexpected or untreatable conditions or those with unexpected or unclear prognosis	3.44 ± .705	3.57 ± .896	4	16	2	9	5	-	-
Results may vary in how immediately they matter	3.44 ± .922	3.40 ± .816	3	7	2	2	1	-	2
Is any individual data entered into public databases	3.43 ± .945	3.40 ± 1.041	4	9	1	3	-	3	2
The test may identify multiple conditions	3.39 ± .502	3.68 ± .900	4	12	1	-	5	5	1
Will family members' results be reported (if used)?	3.30 ± .822	3.52 ± .918	3	2	-	-	1	1	-
How will the patient/client know if results have been reinterpreted?	3.30 ± .876	3.48 ± 1.122	4	1	-	-	-	-	1

What is the mode(s) of inheritance of condition?	3.30 ± .635	3.40 ± .816	3	3	-	1	2	-	-
Your genetic data could identify you	3.28 ± .669	3.57 ± .843	3	15	3	4	8	-	-
There may be different implications if you are employed by business with fewer than 15 people, US Military, or the Federal Government	3.22 ± .850	3.40 ± 1.000	3	8	-	-	5	1	2
Where will the results be placed or stored (e.g. EMR, patient portal)?	3.22 ± .902	3.36 ± .952	3	4	-	1	3	-	-
You may have challenging emotional responses such as anxiety, distress, surprise, confusion	3.17 ± .857	3.61 ± .783	3	13	3	5	5	-	-
Samples from other family members may help interpret the test more accurately	3.13 ± .757	3.44 ± .917	3	7	1	2	1	1	2
Under what circumstances is a reanalysis initiated and by whom?	3.13 ± .968	3.28 ± 1.021	3	5	1	-	-	2	2
Some people may feel more motivated to change their health behaviors after genetic testing results	3.11 ± .758	3.16 ± .850	3	5	-	-	1	3	1

Effects of variants can vary between family members and between families	3.09 ± .996	3.40 ± 1.000	3	1	-	-	-	-	1
What is the likelihood of variants we don't understand (VUS)	3.09 ± .793	3.24 ± 1.091	2	3	-	-	-	2	1
How is data sharing decided and by whom?	3.09 ± .949	3.12 ± 1.092	3	12	2	1	1	4	4
Variants may increase or decrease the risks	3.04 ± .878	3.40 ± 1.118	4	0	-	-	-	-	-
Variants are complicated to interpret	3.00 ± .674	3.48 ± .823	3	0	-	-	-	-	-
Where and how long will the data reports be kept?	2.96 ± .825	2.80 ± .816	3	5	2	-	2	-	1
What gene(s) are included in the test?	2.96 ± .976	2.76 ± .879	2	2	-	2	-	-	
What is the likelihood of other uncertainties in results?	2.91 ± .733	3.00 ± .957	3	0	-	-	-	-	-
What will happen to the results if patient dies?	2.70 ± .926	3.04 ± 1.020	3	0	-	-	-	-	-
What is DNA/Genes/Chromosomes (as relevant)?	2.65 ± .714	2.92 ± .997	2	1	1	-	-	-	-
How often will a reanalysis occur?	2.65 ± .647	2.96 ± .978	3	0	-	-	-	-	-
Are there any physical risks in obtaining the sample?	2.65 ± .832	2.96 ± 1.136	2	0	-	-	-	-	-

Who can request data or reports if the patient dies?	2.65 ± .935	2.88 ± .971	2	6	-	-	1	4	1
What else will the samples be used for and by whom?	2.61 ± .783	3.00 ± 1.258	2	2	-	-	-	1	1
Who can request 'raw data', and how?	2.57 ± .945	2.76 ± .970	2	3	1	-	-	1	1
"Everyone has some mutations"?	2.43 ± 0.896	2.56 ± .917	2	0	-	-	-	-	-
Is any aggregate data entered into public databases?	2.39 ± .839	2.44 ± .768	2	0	-	-	-	-	-
How, where and how long will the sample be kept?	2.35 ± .647	2.40 ± .764	2	2	1	-	-	1	-
There may be physical risks to getting the sample*	2.33 ± 1.085	2.26 ± 1.096	2	4	3	-	1	-	-
What is the name of the lab that will run the sample?	2.17 ± .778	2.16 ± .850	2	2	-	-	-	-	5
Will the sample ever be used for quality control?	1.87 ± .757	1.92 ± .759	2	0	-	-	-	-	-
Technical data on how the sample is run	1.74 ± .619	1.68 ± .557	2	0	-	-	-	-	-
****Q's only on S2 listed below**									
Will there be further testing if this test doesn't give answer?	**4.48 ± .805**		**4**						

Why are we doing this test?	**4.22 ± 2.066**		**5**						
How to share results with family members who may be at risk	3.96 ± 1.107		5						
You may be disappointed if this test does not yield an answer for why you are sick	3.78 ± 1.085		3						
What data might be shared?	3.74 ± 1.214		4						
What about negative impact on family	3.48 ± 1.534		3						
The differences between raw data, interpreted data and interpretive summaries	3.43 ± .896		4						
Your personal identity may be compromised (e.g. identity theft, criminal)	3.30 ± 1.363		3						
There is potential for disagreement about what to do with a genetic diagnosis in a family. This can lead to interpersonal conflict	3.26 ± 1.096		3						
How data (not just sample) will be shared or stored, particularly from a commercial	3.22 ± 1.242		3						

perspective (sales, transfers)									
Group privacy considerations	3.22 ± 1.166		3						
How to access raw data and its interpretations	2.83 ± 1.029		3						

Items are presented in rank order from highest to lowest means on S2. Items in bold demonstrated at least one round with mean scores ≥4.00

Additional 12 concepts that were added to S2 after free-text comments on S1

*Due to a technical glitch there are some questions that were only answered by N=18 (of 23) respondents in Survey 2.