

Appendix 1. Literature overview on interest in and willingness to pay for cancer susceptibility testing (CST) compared to our study results

Explanatory factors	Outcome measures [†]		Definitions of factors, description of previous study results, and precisions	Our study results		
	Interest in CST	WTP for CST		Interest in BCST	WTP for BCST	
Socio-demographic factors	Age*	Age: NEG ¹ POS ²⁻⁴ NS ^{5 6 7 8 9} Younger age: POS ¹⁰	Age: NS ^{5 1} NEG ^{11 12} POS ¹²	<p>Definition: Age of either patients or individuals of the general population</p> <ul style="list-style-type: none"> Link between age and interest or WTP for CST are still equivocal. Systematic reviews conclusions: studies having assessed association between age and interest toward genetic tests proposed globally mixed findings and mostly inconsistent effects¹³; WTP values for dx tests can be positively influenced by older age.¹⁴ Age is an important element of women's BC risk assessment: aging is associated with BC, but familial and genetic BC are often developed at a younger age than sporadic forms of BC.¹⁵ 	MA	POS
	Ethnicity	Race: NS ^{5 7 8 16}	Race: NS ^{5 16} Race: NS ¹¹ Ashkenazi decent: NS ¹⁷	<p>Definition: Person's race or cultural traits relevant to particular group</p> <ul style="list-style-type: none"> According to the literature on CST, race seems to not have any effect on interest and WTP. Systematic reviews conclusions: These variables have not been discussed for interest; WTP values for dx tests are positively influenced by a majority race or ethnicity, especially white Americans.¹⁴ Some populations or groups of a particular biological background are at greater risk of BC (e.g., French-Canadian, Ashkenazi, Islanders).¹⁸ 	<i>N.B. The sample does not present sufficient variation in terms of ethnicity backgrounds (95% of White women) to be included in the statistical exercise.</i>	
	Marital Status*	Marital status: NS ^{5 8 10} NEG ⁴	Marital status: NS ^{5 11}	<p>Definition: Person's legal marital status (e.g., common law, single, divorced...)</p> <ul style="list-style-type: none"> According to the literature on CST, marital status seems to not have an effect on interest and WTP. Systematic reviews conclusions: Relationship between interest and marital status is supported by equivocal findings.¹³ As genetic tests results might have important implications for family-planning decisions, it seems logical that marital status could influence genetic testing decisions.¹³ This variable was also proved to be of great importance in cancer care. It has recently been demonstrated that unmarried persons were at a higher risk for cancer, undertreatment and death from cancer.^{19 20} 	MA (WSD)	MA (WSD)
	Education level*	Education: NS ^{5 7 10 16 21} Year of education: NEG ³	Education: NEG. ¹² POS. ^{11 16} NS. ⁵	<p>Definition: Person's highest completed degree or diploma.</p> <ul style="list-style-type: none"> Link between education level and interest or WTP for CST is still equivocal. Systematic reviews conclusions: Interest toward genetic tests is inconsistent across studies.¹³ WTP values are generally positively associated with education for dx tests.¹⁴ 	NS	NS
	Employment status/ primary activities	Employment: POS ⁸ NS ^{5 21}	Employment: NS ^{5 11}	<p>Definition: Person's primary activities of a diary day; it can correspond to employment status for paid work (part- or full-time), but also to unpaid work such as study, housework, social support, volunteering, etc.</p> <ul style="list-style-type: none"> Link between employment and interest or WTP for CST seems not significant. Systematic reviews conclusions: Few studies have assessed the link between employment and interest for genetic testing. Mixed findings are reported.¹³ 	<i>N.B. This concept is often correlated with income and education; it was removed from the statistical exercises for parsimonious reasons.</i>	

	Income*	Household income: NS ^{5,7,10} POS. ⁸	Household income: NS. ^{5,11} ¹²	<p>Definition: Combined gross income of all members of a household.</p> <ul style="list-style-type: none"> Link between income and interest or WTP for CST seems to be not significant. Systematic reviews conclusions: Associations of interest for genetic testing and income are inconsistent,¹³ but WTP values for dx tests are generally positively associated with incomes.¹⁴ 	POS (INC1, INC2)	POS (ALL)
	Household size	Household size: POS. ⁸	NA	<p>Definition: Number of persons residing in a private household.</p> <ul style="list-style-type: none"> There is insufficient information regarding household size and interest or WTP for CST. 	<i>N.B. This concept is partly assessed by marital status and parity for many respondents. It was eliminated from the statistical exercise.</i>	
	SES	Socio-economic status: NEG ^{1,2} NS ⁹	Socio-economic status: POS. ¹	<p>Definition: SES is a concept that reflects more broadly familial resources, including education, employment, goods and revenues.</p> <ul style="list-style-type: none"> There is insufficient information regarding SES and interest or WTP for CST. 	<i>N.B. This concept is a mix of other retrieved sociodemographic characteristics in the literature; it has been discarded from the statistical exercise to avoid theoretical redundancy.</i>	
Medical factors	Past medical exams/ results*	Previous examination: MA ⁷ Timing of the most recent biopsy: NS ⁵ Prior history of cancer: POS ^{10,3}	Personal BC history: NS ⁵ Personal history of GI cancer: NS ¹¹ Personal history of cancer: NS ¹¹	<p>Definition: Prior test results or health exams of an individual linked to the evaluated health condition.</p> <ul style="list-style-type: none"> According to the literature on CST, past medical exams or results could have an impact on interest while they seem to not have an effect on WTP. Systematic reviews conclusions: It is not clear whether WTP values for dx tests were associated with past medical exams and results.¹⁴ 	<i>N.B. Biopsy was used as a measure of past exam in the present study.</i>	
	Children/ Parity*	Children: NS ⁸ POS ²²	NA	<p>Definition: Woman having/giving birth to at least one child.</p> <ul style="list-style-type: none"> Parity/parental status was insufficiently assessed for CST. Systematic reviews conclusions: Relationship between interest for genetic testing and parental status is still equivocal.¹³ Nulliparity (never having given birth) is a risk factor as parity is a protective factor of BC.²³ 	NS	NS
	Family history*	FDR had cancer: NEG ¹ NS ^{5,7,21} POS ^{2,21} ³ BC in family: POS ^{22,9} Number of FDR: POS ¹⁰	FDR had cancer: NEG ^{1,11} ⁷ NS ^{5,17} Family member tested positive: NS ¹⁷	<p>Definition: People who have one or more relatives (1st to 3rd degree) who have had a cancer dx.</p> <ul style="list-style-type: none"> Family history seems to be associated with interest for CST while more evidence is needed for WTP for such a test. Systematic reviews conclusions: Generally, positive family history is associated with interest in genetic testing¹³ and WTP for dx tests technologies.¹⁴ Family history is an important risk factor of BC.²³ 	POS	POS

Psychosocial factors	Optimism*/ Pessimism	Optimism NEG ¹ POS ^{2,4} Pessimism: POS ^{2,9,1} (Depressive sx: POS ¹⁰)	Optimism: NEG ¹ Pessimism: NS ¹	<p>Definition: Person's tendency to have positive (optimists) or negative (pessimists) expectancies about their future (e.g., events, acts).²⁴</p> <ul style="list-style-type: none"> Mixed findings were reported regarding association between optimism/pessimism and interest for genetic testing and more research is needed for WTP in the context of CST. Systematic reviews conclusions: Person having a more positive outlook, highly optimistic or low in depression sx was more interested in genetic testing even if some mixed findings were reported for BC.¹³ This construct is often measured with the Life Orientation Scale.²⁴ 	NEG	NS
	Monitoring*	Seek information: NS ^{2,1} Preference for medical information: NS ⁹	Information seeking: NEG ¹	<p>Definition: Coping style based on personal information preferences about an event: information seekers are considered as high monitors and information avoiders are considered as low monitors.^{13,25}</p> <ul style="list-style-type: none"> In the context of CST, retrieved studies indicate that being an information seeker is not associated with interest for genetic testing. Systematic reviews conclusions: High monitors have more interest in genetic testing even if mixed findings are reported for some cancers.¹³ This construct is often measured with the Miller Behavioral Style Scale.²⁵ 	POS	NS
	Perceived control*	Perceived control: NS ^{26,21} POS ²⁶ God Locus of Health control: NS ¹⁰	Risk tolerance: NEG ¹² Perceived control: POS ¹¹	<p>Definition: Person's perception of his own ability to manage his health/disease risk.</p> <ul style="list-style-type: none"> More research is needed toward perceived health control and interest as well as WTP for CST, but retrieved studies seem to indicate that it could have an impact on both outcome measures. Systematic reviews conclusions: Greater perceived control over the management and prevention of a disease is associated with interest for genetic testing.¹³ For some diseases without controllable risk factors, WTP values are higher.¹⁴ This construct could be measured with the Multidimensional Health Locus of Control Scales.²⁷ 	POS (PHLC) NS (IHLC) NEG (CHLC)	POS (PHLC) NS (IHLC, (CHLC)
	Worries/ Anxiety*	Concerns about developing cancer: POS ⁷ Cancer worries: POS ⁵ NS ²⁸ Intrusions-Worries: POS ²⁹ Fears: NEG ²⁹ Uncertainty: POS ²¹	Worry about positive results: POS ¹¹ NS ¹⁷ Cancer worries: POS ⁵	<p>Definition: Personal emotional aspects of risk for a specific health condition.¹³</p> <ul style="list-style-type: none"> Worries toward cancer are generally associated with interest and WTP for CST. However, measures used by authors varied considerably. Systematic reviews conclusions: Mixed findings were reported regarding interest for genetic testing and disease-specific worries even if studies tend to support a positive association between those concepts.¹³ 	<i>N.B. As this concept is related to disease-specific perceived risk,¹³ a scale of general psychological distress was used to measure respondents' level of anxiety. The K-6 was used.³⁰</i>	
	Numeracy*	Understanding risk information: NS ⁵	Understanding risk information: NEG ⁵ Objective numeracy: NS ¹⁷ Subjective numeracy: POS ¹⁷	<p>Definition: Person's ability to understand quantitative information and manipulate basic probability and numerical concepts.³¹</p> <ul style="list-style-type: none"> There is insufficient information regarding numeracy and interest in CST. Mixed findings for WTP for CST are reported. It is important to note however the variation of the operationalization used to measure the concept of numeracy. Systematic reviews conclusions: this concept was not reported. 	NEG	NS

Knowledge	Genetic knowledge: NS ⁵ 10 29 Knowledge of genetic test: POS ³ Awareness: NS ⁹	Genetic knowledge: NS ⁵ Knowledge & awareness: NS ¹¹	Definition: Generally concerned about what a person knows about genetic risk or genetic test for a particular disease. <ul style="list-style-type: none"> Systematic reviews conclusions: Mixed findings were reported regarding its association with interest toward genetic testing. 	<i>N.B. This concept was not included in the statistical model as it was too correlated with perceived risk.</i>	
General health*	Current health: NS ⁷ Health Behaviors:	NA	Definition: Perception of own actual health state. <ul style="list-style-type: none"> There is insufficient evidence regarding perceived health status and interest or WTP for CST. Systematic reviews conclusions: Few studies have assessed the relationship between general health and interest in genetic testing; equivocal results are reported.¹³ More health conscious people are likely to accept higher WTP values.¹⁴ 	NEG (GOOD)	NEG (GOOD)
Perceived risk of BC*	Perceived susceptibility POS ^{1 2 9} Perception of risk: MA ⁷ Absolute perceived risk: NS ⁵ Comparative perceived risk: NS ⁵ Numeric perceived risk: NS ⁵ Perceived risk: NS ^{28 21} POS ¹⁰ Perceived vulnerability: POS ²⁹	Prior risk: NS ¹² Perceived susceptibility: POS ¹ Perceived susceptibility: NS ¹⁷ Perceived risk of having the mutation: POS ¹⁷ Absolute perceived risk: NS ⁵ Comparative perceived risk: NS ^{5 11} Numeric perceived risk: NS ⁵	Definition: Generally, the person's estimation of his own likelihood of developing the disease in a specific time frame. <ul style="list-style-type: none"> Link between risk perception and interest or WTP for CST is still equivocal. Systematic reviews conclusions: In general, perceived risk is associated with an increased interest for genetic testing, but inconsistent findings were reported for some hereditary conditions.¹³ Increased WTP values for dx tests were associated with higher risk perception.¹⁴ 	POS	NS

[†] NS: association not significant; MA: Marginally significant association; NEG: negative association; POS: positive association.

* Variables conserved in the regression models.

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