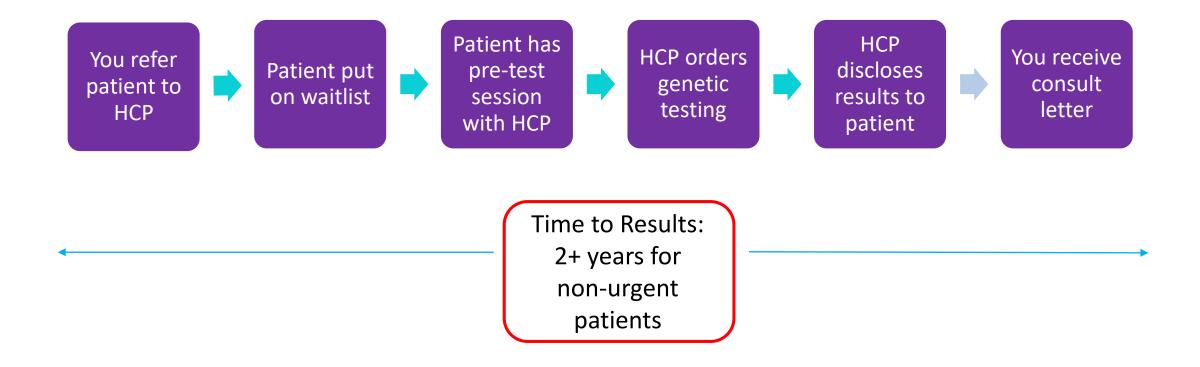
# Hereditary Cancer Program Mainstreaming: Increasing Access to Hereditary Cancer Genetic Testing



# BC Cancer Hereditary Cancer Program

- HCP's Goals:
  - Identify patients and families with hereditary forms of cancer.
  - Facilitate "cascade-testing" for family members once a hereditary cancer mutation is identified in a family.
  - Help high risk individuals access increased screening and risk-reducing procedures.
  - Provide support and updates to mutation carriers as our knowledge of hereditary cancer evolves.

#### Current pathway to access hereditary cancer genetic testing:



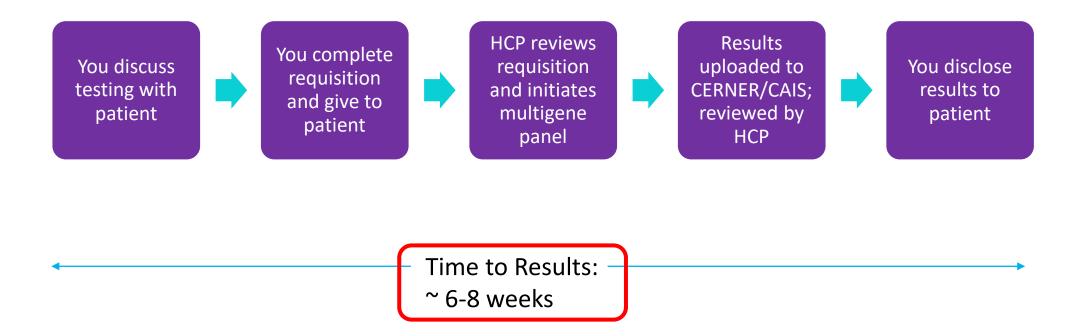
# **HCP Mainstreaming**

Non-genetics clinicians will be able to order hereditary cancer genetic testing for **specific patient populations**\*.

#### -No referral to HCP required to access testing -No family history form required -Your patients will receive testing and results faster

\*See requisition form at <u>http://cancergeneticslab.ca/genes/hereditary-cancer-panel/</u> for current eligibility criteria.

### HCP Mainstreaming Pathway:



### Is Mainstreaming Right for Your Patient?

- Consider referring your patient to HCP **instead** if:
  - Your patient has many questions or concerns about genetic testing.
  - Your patient may have difficulty understanding or coping with their result.
  - There is a known hereditary cancer mutation in your patient's family.
  - Your patient requires genetic counselling regardless of their test results:
    - Patient with multiple primary cancers consistent with a hereditary cancer syndrome
    - Patient with cancer diagnosed at an unusually young age
    - Patient meets clinical criteria for a hereditary cancer syndrome

#### The Requisition

CANCER	GENETICS	S AND GE	NOMI	CS I	ABORAT	ORY			ADDRESS	OGRAPH OR PA	TIENT LABEL
HER	EDITARY	CANCERI	MULTI-	GEI	NE PANEL						
BC CAN CER		ogy and Laborator West 10th Avenu 5Z-4E6	Y MEDICINE FA	X: 604 Ion-Fri WW.CA	-6000 EXT 67-2094 -877-6294 8:30AM-4:30PM NCERGEN ETICSLAB.CA COUNSELLOR@BCCAN	ER.BC.CA					
		PATIENT INFOR							REQ	UESTING PHY	/SICIAN
Last Name			nd Middle Na	mes			Name				MSC
D . (D) . (1)										Fax	
Date of Birth (dd/r	nmm/yyyy)	Gender Male	Female	Non B	inary/Other/Not D	isclosed	Phone	2		Fax	
PHN		BC Cancer ID		Cern	er MRN		Email	Address			
Email Address							Addre	55			
	c	CONSENT TO SHA	RE <b>R</b> ESULTS								
	heir results being sl	ared with relativ	es referred to	BC Ca	ncer for genetic te	ting					
Yes No	to receive their res				Control Contact No.						
Name	to receive their res	Relationship to			act Phone / Email						
10005000000					······································						EQUIRED (BELOW)
									YSICIANS	ALL INFORM	ATION IS NECESSARY)
Specimen Type	Collect 1 × 6m	SPECIME LEDTA blood.	N	Calle	ection Date (dd/mn	m haaad	Name				MSC
Peripheral Bloc	, Store and ship at r	com temperature using Genetics and Genomics	overnight	Cone	cuon Date (uu/inii	1111/99999)	Addre	55			
	(address above). D	o not refrigerate or free	ze.								
	CER TESTING INFOR I test to see if your o			10			Name MSC				
	is hereditary, you w						Addre	55			
	Its may have implic										
	ilts may be used to g nadian Genetic Non						Name MSC				
	nnot ask for your ge						Addre	55			
	amples may be store op new clinical gene		er Genetics &	Genon	nics Laboratory and	тау бе					
					TEST REQUESTE	D					
Hereditary Ca	ncer Multi-Gene I	Panel Testing <sup>S</sup>	Q HCAGPB								
					CKGROUND - SEL	CT ALL TH	<b>ΑΤ ΑΡΡΙ</b>	(			
Africa /	Asia East	Europe / UK	Indigeno (First Natio		Jewish Ashkenazi	Middle	East		/ Central		Other
	South/Central		Metis, Inc		Sephardic			Am	erica		
							]			Specify:	
			TESTIN	g Indi	CATION(S) – SELEC	T ALL THAT	APPLY				
Hereditary Breas	and Ovarian Ca	ncer			.,			ish Herita	age		
Breast cancer										reast, ovaria	an, pancreatic, high
	ast cancers, at lea: e (ER-PR-HER2-) b		e 60			grade Other	e prosta	ite cance	r		
Breast cancer	≤ age 50 AND no t	family history kr	nown due to				pproved	by Here	ditary Ca	ncer Progra	m
	pian tube or perito	oneal cancer (no	n-mucinous	epith	elial; incl. STIC)	1 ** Co	onfirmat	tion of p	athogenie	variant res	ult (include relevant
Male breast ca											trial/research testing) ST TO PROCEED)
	ri stal adenocarcino	ma					CATION	Y ANAN'I U	ICTAILS (REC	ZOINED FOR TES	STIC ROULED
-	uroendocrine tum	our									
Prostate Cancer	ostate cancer										
		By signing	z below. I her	ebv ar	knowledge that I h	ave inform	ed the n	atient aba	out the im	plications of	hereditary testing.
PHYSICIAN SIGNA	TURE (REQUIRED)	Sy signifi	,	y al			- a site p	DA			
Lon Hor PB ED	TA Other			_							
LAB USE PB ED ONLY											
		LTI-GENE PANEL REQUISITI									

CACG\_CGL\_3017 CGL HEREDITARY CAN CER MULTI-GENE PANEL I V.1.0 JUNE 2022

http://cancergeneticslab.ca/genes/hereditary-cancer-panel/

#### Sections to Complete: Patient Information

CANCER G	<b>SENETICS</b>	AND GENOMI	ADDRESSOGRAPH OR PATIENT LABEL				
HERE	<b>DITARY</b> C	ANCER MULTI	<b>GENE PANEL</b>				
CAN	BC Cancer Dept. of Patholog Room 3307 - 600 V Vancouver BC V52						
	1	PATIENT INFORMATION		REQUES	TING PHYS	SICIAN	
Last Name		First and Middle N	ames	Name		MSC	
Date of Birth (dd/mm	ım/yyyy)	Gender Male Female	Non Binary/Other/Not Disclosed	Phone	Fax		
PHN		BC Cancer ID	Cerner MRN	Email Address			
Email Address				Address			
	Co	INSENT TO SHARE RESULTS					
Patient agrees to thei Yes No	r results being sha	red with relatives referred t	o BC Cancer for genetic testing				
If patient is unable to	receive their resul	Its, it should be disclosed to	(or shared with):				
Name		Relationship to patient	Contact Phone / Email	NOTE: PHYSICIAN SIGNATURE REQUIRED (BELOW)			
				COPY PHYSICIANS (ALL	INFORMA	TION IS NECESSARY)	
		SPECIMEN	·	Name		MSC	
Specimen Type Peripheral Blood	delivery to Cancer Ge	EDTA blood. m temperature using overnight enetics and Genomics Laboratory not refrigerate or freeze.	Collection Date (dd/mmm/yyyy)	Address			
HEREDITARY CANCER	TESTING INFORM	MATION		Name		MSC	

#### Sections to Complete: Requesting Physician Information

CANCER G	<b>SENETICS</b>	AND GENOMI	ADDRESSOGRAPH OR PATIENT LABEL			
HERE	<b>DITARY</b> C	ANCER MULTI	-GENE PANEL			
CAN	BC CANCER DEPT. OF PATHOLOG ROOM 3307 - 600 V VANCOUVER BC V52					
		PATIENT INFORMATION		KE	QUESTING PHYS	SICIAN
Last Name		First and Middle N	am es	Name		MSC
Date of Birth (dd/mm	ım/yyyy)	Gender Male Female	Non Binary/Other/Not Disclosed	Phone	Fax	
PHN		BC Cancer ID	Cerner MRN	Email Address	•	
Email Address				Address		
	Co	DISENT TO SHARE RESULTS		1		
Patient agrees to thei Yes No	r results being sha	ared with relatives referred t	o BC Cancer for genetic testing	1		
If patient is unable to	receive their resu	Its, it should be disclosed to	(or shared with):			
Name		Relationship to patient	Contact Phone / Email	NOTE: PH YSIC	IAN SIGNATURE RE	QUIRED (BELOW)
				COPY PHYSICIAN	s (ALL INFORM	TION IS NECESSARY)
		SPECIMEN		Name		MSC
			Collection Date (dd/mmm/yyyy)	Address		
HEREDITARY CANCER			•	Name		MSC

# Indicate if the patient consents to share their results and who should receive the results if they pass away.

1						-	_			
	CANCER O	<b>GENETICS</b>	AN	D GENOMI	ADDRESSOGRAPH OR PATIENT LABEL					
	HERE	DITARY (	CANC							
	HEREDITARY CANCER MULTI-GENE PANEL         BC         CANCER         DEPT. OF PATHOLOGY AND LABORATORY MEDICINE         ROOM 3307 - 600 West 10TH AVENUE         VANCOUVER BC V5Z-4 E6									
			PATIEN	T INFORMATION				REQUEST	ING PHYS	ICIAN
	Last Name			First and Middle N	Names			e		MSC
	Date of Birth (dd/mm	m/yyyy)	Gende M		Female Non Binary/Other/Not Disclosed			Phone Fax		
	PHN		BC Car	ncer ID	Cerner MRN	Email Address				
	Email Address					Ad	ldr	ress		
1		C	ONSENT	TO SHARE RESULTS		n				
	Patient agrees to thei Yes No	r results being sh	ared wit	h relatives referred t	o BC Cancer for genetic testing	]	l			
	If patient is unable to	receive their resu	ults, it sh	ould be disclosed to	(or shared with):					
	Name Relationship to patient Contact Phone / Email							NOTE: PHYSICIAN SIG		QUIRED (BELOW)
							J	COPY PHYSICIANS (ALL	INFORMA	TION IS NECESSARY)
4	Specimen						m	e		MSC
	Specimen Type         Collect 1 x 6m L EDTA blood.         Collection Date (dd/mmm/yyyy)           Store and ship at room temperature using overnight delivery to Cancer Genetics and Genomics Laboratory (address above). Do not refrigerate or freeze.         Collection Date (dd/mmm/yyyy)						ldr	ress		
	HEREDITARY CANCER	HEREDITARY CANCER TESTING INFORMATION								MSC

# Review the Hereditary Cancer Testing Information with your patient.

			COPY PHYSICIANS	(ALL INFORMATION IS NECESSARY)			
	SPECIMEN	Name	MSC				
Specimen Type Peripheral Blood	Collect 1 x 6mL EDTA blood. Store and ship at room temperature using overnight drillways to Canadian and Canadian about the	Collection Date (dd/mmm/yyyy)	Address				
	(address above). Do not refrigerate or freeze.						
HEREDITARY CANCER	TESTING INFORMATION		Name	MSC			
If your cancer is h	st to see if your cancer is hereditary. About 1 in hereditary, you will have an appointment with a may have implications for relatives.	Address					
Under the Canad	may be used to guide your cancer treatment an ian Genetic Non-Discrimination Act (GNDA), co	mpanies (including insurers) and	Name	MSC			
Any unused samp	it ask for your genetic test results or ask you to ples may be stored at the BC Cancer Genetics & new clinical genetic tests in BC.		Address				
		TEST REQUESTED					
Hereditary Cance	er Multi-Gene Panel Testing SQ HCAGPB						

ANCESTRAL BACKCROUND - SELECT ALL THAT ADDIV

The patient does not need to sign a consent form, but you must confirm and document their informed consent before proceeding.

# An Important Note about Informed Consent...

- You are responsible for ensuring that the patient gives their informed consent:
  - Do they understand the purpose of the testing?
  - Do they understand the possible results?
  - Do they understand they potential implications for themselves AND their relatives?
- The patient does not need to sign a consent form.
  - Document the patient's verbal consent in their chart.
- Patients who have concerns about proceeding with genetic testing should be referred to HCP.

#### If possible, provide ancestry information.

		SPECIME	N			Name		MSC
Specimen Type Peripheral Blood	delivery to Cancer (	LEDTA blood. om temperature using of Genetics and Genomics L o not refrigerate or freez	ım/үүүү)	Address				
HEREDITARY CANCER	R TESTING INFOR	MATION	Name		MSC			
<ul> <li>If your cancer is</li> <li>Your test results</li> </ul>	est to see if your c hereditary, you w may have implica	ill have an appoint tions for relatives	Address					
<ul> <li>Under the Canader employers cannot any unused same</li> </ul>	s may be used to g dian Genetic Non- ot ask for your gen ples may be store new clinical gene	Discrimination Act netic test results o d at the BC Cance	Name Addre	55	MSC			
				TEST REQUESTE	D			
Hereditary Cano	er Multi-Gene F	anel Testing SC	HCAGPB					
			ANCESTRAL B	BACKGROUND - SELE	CT ALL THA	T APPLY	r -	
	Asia East South/Central	Europe / UK	Indigenous (First Nations, Metis, Inuit)	Jewish Ashkenazi Sephardic	Middle	East	South / Central America	Other
								Specify:
			TESTING INI	DICATION(S) - SELEC				
Hereditary Breast a Breast cancer ≤ a 2 primary breast Triple negative ( Breast cancer ≤ a Ovarian, fallopia Male breast cancer Pancreatic Cancer Pancreatic ducta Pancreatic neuro Prostate Cancer Metastatic prost	age 35 cancers, at leas ER-PR-HER2-) br age 50 AND no f n tube or perito cer al adenocarcinor pendocrine tumo	tt 1 ≤ age 50 east cancer ≤ ag amily history kn neal cancer (nor na	own due to ado	Perso grade Other ** Ap ** Co rep	prosta prosta proved nfirmat ort(s) fi	te cancer by Hereditary Ca ion of pathogenic rom tumour testin	reast, ovarian, pancreatic, high ncer Program c variant result (include relevant ng or clinical trial/research testing) QUIRED FOR TEST TO PROCEED)	
		By signing	below, I hereby a	acknowledge that I h	ave informe	ed the pa	atient about the im	plications of hereditary testing.
PHYSICIAN SIGNATU	RE (REQUIRED)						DATE	
LAB USE PB EDTA ONLY CACG CGL 3017 CGL	Other HEREDITARY CANCER MUL	TI-GENE PANEL REQUISITIO	N				÷	

V.1.0 JUNE 2022

#### You must select at least one applicable testing indication.

		SPECIME	N			Name		MSC
Specimen Type Peripheral Blood	Store and ship at r delivery to Cancer	<b>LEDTA blood.</b> com temperature using Genetics and Genomics to not refrigerate or frees	overnight Laboratory	lection Date (dd/mn	nm/yyyy)	Addre	55	
HEREDITARY CANC	ER TESTING INFO	RMATION				Name		MSC
If your cancer i	s hereditary, you v	cancer is hereditar vill have an appoin ations for relatives	tment with a gener	ncers are hereditary. tic counsellor.		Addre	55	
<ul> <li>Under the Can employers can</li> <li>Any unused sat</li> </ul>	adian Genetic Non not ask for your ge	-Discrimination Ac enetic test results o ed at the BC Cance	t (GNDA), compani r ask you to have g	us about new cancer ies (including insurer genetic testing. mics Laboratory and	s) and	Name Addre		MSC
				TEST REQUESTE	D			
Hereditary Car	cer Multi-Gene	Panel Testing	) HCAGPB					
			ANCESTRAL B	ACKGROUND - SEL	ECT ALL THA	T APPL	(	
Caribboan	Asia East South/Central	Europe / UK	Indigenous (First Nations, Metis, Inuit)	Jewish Ashkenazi Sephardic	Middle	East	South / Central America	Other
						]		Specify:
			TESTING INC	DICATION(S) - SELEC	T ALL THAT	APPLY		
Hereditary Breast Breast cancer ≤ 2 primary breast Triple negative Breast cancer ≤ Ovarian, fallopi Male breast can Pancreatic Cancer Pancreatic duct Pancreatic neur Prostate Cancer Metastatic pros	age 35 st cancers, at lea (ER-PR-HER2-) b age 50 AND no an tube or periton cer al adenocarcino roendocrine tum	st 1 ≤ age 50 reast cancer ≤ ag family history kn oneal cancer (no ma	own due to adop		Perso grade Other #** Ap	onal or f prosta oproved onfirmat	ite cancer I by Hereditary Ca tion of pathogeni rom tumour testin	reast, ovarian, pancreatic, high ncer Program c variant result (include relevant ng or clinical trial/research testing) QUIRED FOR TEST TO PROCEED)
		By signing	below, I hereby a	cknowledge that I h	ave informe	ed the p	atient about the im	plications of hereditary testing.
PHYSICIAN SIGNAT	URE (REQUIRED)						DATE	
LAB USE PB EDT/ ONLY	A Other							

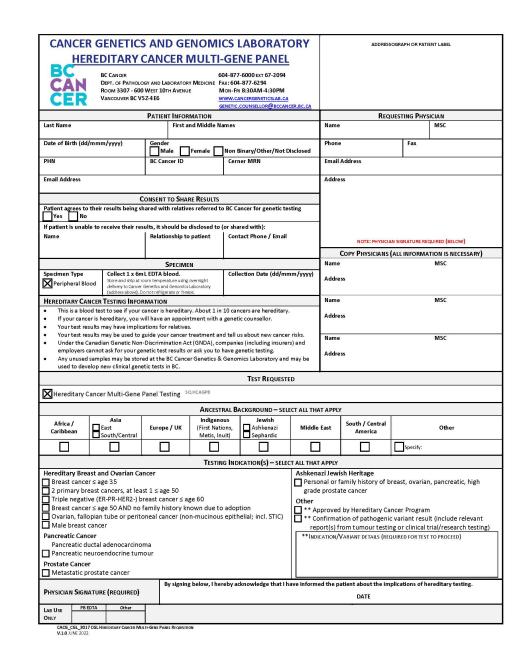
V.1.0 JUNE 2022

#### You must sign and date the form.

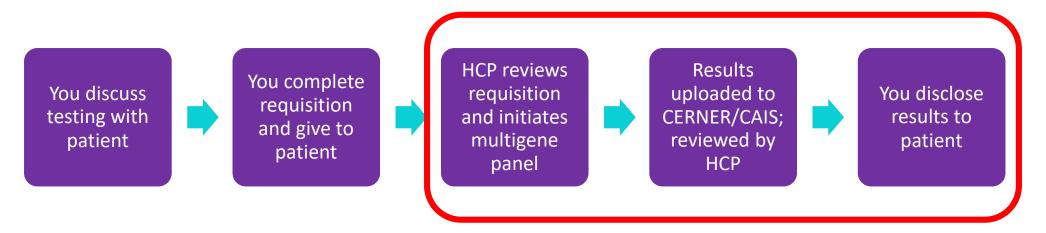
		SPECIME				Name		MSC
Specimen Type Peripheral Blood	Store and ship at r delivery to Cancer	LEDTA blood. com temperature using Genetics and Genomics o not refrigerate or free	overnight Laboratory	ection Date (dd/mn	nm/yyyy)	Addre	55	
HEREDITARY CANCE	R TESTING INFOR	RMATION		Name		MSC		
<ul> <li>If your cancer is</li> <li>Your test result</li> </ul>	hereditary, you v s may have implic	vill have an appoin ations for relatives	tment with a genet			Addre	55	
<ul> <li>Under the Cana employers cann</li> <li>Any unused san</li> </ul>	dian Genetic Non ot ask for your ge	-Discrimination Ac netic test results o ed at the BC Cance	treatment and tell t t (GNDA), compani r ask you to have g r Genetics & Genor	s) and	Name Addre	55	MSC	
				TEST REQUEST	D			
Hereditary Can	er Multi-Gene	Panel Testing SC	CAGPB					
			ANCESTRAL B	ACKGROUND - SEL	ECT ALL THA	T APPLY	6	
	Asia East South/Central	Europe / UK	Indigenous (First Nations, Metis, Inuit)	Jewish Ashkenazi Sephardic	Middle	East	South / Central America	Other
						]		Specify:
			TESTING IND	ICATION(S) - SELEC	T ALL THAT	APPLY		
Hereditary Breast Breast cancer ≤ 2 primary breas Triple negative ( Breast cancer ≤ Ovarian, fallopia Male breast can Pancreatic Cancer Pancreatic ducta Pancreatic neur Prostate Cancer	age 35 t cancers, at lea ER-PR-HER2-) b age 50 AND no in tube or perito cer al adenocarcino	st 1 ≤ age 50 reast cancer ≤ ag family history kn oneal cancer (no ma	own due to adop	Ashkenazi Jewish Heritage Personal or family history of breast, ovarian, pancreatic, high grade prostate cancer Other ** Approved by Hereditary Cancer Program ** Confirmation of pathogenic variant result (include relevant report(s) from tumour testing or clinical trial/research testing) **INDICATION/VARIANT DETAILS (REQUIRED FOR TEST TO PROCEED)				
Metastatic pros	tate cancer							
	IRE (REQUIRED)	By signing	; below, I hereby a	cknowledge that I h	ave informe	ed the pa	atient about the im DATE	plications of hereditary testing.
LAB USE PB EDTA	Uther	4						
ONLY								

#### The Requisition

- Once completed, give the requisition to the patient.
- The patient can bring the requisition to any blood lab.
- No fasting or special preparation required.



## HCP Involvement and Support



#### **HCP will:**

-Review all requisitions.

- -Review all reports.
- -Create reflex referrals to HCP for patients with positive results or concerning VUS.
- -Notify you when the report is ready and whether we've referred the patient to HCP.
- -Answer questions/provide support throughout testing process.

# How will you know if your patient needs an HCP referral?

- HCP will contact you by email when the result is ready and let you know if we've referred the patient to our program.
- Consider referring your patient to HCP regardless of their result if:
  - You are still concerned about their hereditary cancer risk:
    - Patient with multiple primary cancers consistent with a hereditary cancer syndrome
    - Patient with cancer diagnosed at an unusually young age
    - Patient meets clinical criteria for a hereditary cancer syndrome
  - Your patient requires further support understanding or coping with their genetic testing results.

## An Important Note about VUS...

- Do not alter cancer screening or management!
- Carrier testing is generally not offered to relatives.
- Most are harmless variations in the genetic code.
- Patient can contact HCP every 1-2 years to request a variant review.

# What if my patient does not wish to have genetic testing right now?

- Consider offering DNA storage to your patient.
  - This will help ensure that DNA is available for testing at a later date.
  - See HCP's DNA storage package:
    - http://www.bccancer.bc.ca/coping-and-supportsite/Documents/Hereditary%20Cancer%20Program/HCP\_Form-UrgentDNARequisitionConsentForm.pdf

# HCP Mainstreaming – Ordering Physician Checklist

• Pre-test:

Discuss genetic testing with patient and confirm their consent to proceed.

Complete requisition and give it to the patient.

Document your discussion with the patient in their chart.

# HCP Mainstreaming – Ordering Physician Checklist

• Post-test:

□ Review report in CERNER/CAIS.

Disclose result to patient.

Document your discussion with the patient in their chart.

# Questions?

Contact the HCP Lab Genetic Counsellor:

• genetic.counsellor@bccancer.bc.ca

