Select optimal tissue specimen for successful tests

Specimen selection

		MyChoice® CDx	Precise Tumor®	PD-L1	FRα
Cancer type	Ovarian, fallopian tube, and primary peritoneal cancer	✓	✓	✓	✓
	Endometrial primary	∅	✓	✓	∅
	All other tumor types	∅	✓	✓	∅
Fixative	10% neutral buffered formalin	✓	✓	✓	✓
	Formalin and alcohol mixture	✓	✓	✓	∅
	Any other validated fixative	✓	∅	∅	∅
Specimen types	Frozen section tissue	✓	✓	✓	✓
	Cytology cell block	✓	✓	✓	∅
	Brain tissue	✓	✓	✓	✓
	Acid decalcified bone	∅	∅	∅	∅
	EDTA decalcified bone	✓	✓	✓	✓
	Most recent procedure recommended	∅	✓	✓	✓

1

Chemotherapy-naive

Ideal specimens are chemotherapy-naive tumors from primary debulking surgery or biopsy.

2

Chemotherapy-treated*

If patient has received neoadjuvant therapy, chemotherapy-treated tumors from primary debulking surgery may be submitted, but chemotherapy-naive tumor from biopsy is preferred.

*Pre-treatment biopsy specimens should be considered in patients with complete or near-complete treatment response.

3

Biopsy

If debulking doesn't provide sufficient tumor, pre-treatment biopsy specimens should be considered.

4

Cytology

Cytology cell blocks (e.g., ascites fluid) are acceptable but tumor content must exceed 30%. Unfixed cytology specimens are not appropriate for genomic testing. Cytology cell blocks are not acceptable for FRα testing.

Single test order

Blocks (Preferred)

At least one tumor block with a cross-sectional tumor area of **25mm² containing at least 40 µm of tumor** should be chosen for testing

Slides

If only tumor slides are available, preparation instructions below should be followed:

- Cut and label **one 5µm section** for H&E staining on a **charged** slide
- Cut and label 5 µm sections on **uncharged** slides:

Area of tumor (mm²) with ≥30% tumor	20-25	15-19	10-14	5-9
# of 5µm unstained slides	8	12	16	20

– If cutting 10 µm sections, **please label** on slide "10µm"

Biopsy

For small biopsies, try to submit at least 15 to 20 sections from 6 to 8 cores

Multiple test order

At least one tumor block with a cross-sectional tumor area of **25mm² containing at least 80µm of tumor** should be chosen for testing

If only tumor slides are available, preparation instructions below should be followed:

- Cut and label **two 5µm sections** for H&E staining on a **charged** slide
- Cut and label 5µm sections on **uncharged** slides:

Area of tumor (mm²) with ≥30% tumor	20-25	15-19	10-14	5-9
# of 5µm unstained slides	16	24	32	40

– If cutting 10µm sections, **please label** on slide "10µm"

FOLR1/FRα and PD-L1 specimen collection

Can be performed on tumor specimen FFPE block if provided, or:

- Additional two slides, each with at least one section of 4-5 microns thickness provided on unstained, unbaked, positively charged, hydrophilic slides with 90 degree corners. Cytology cell blocks are not acceptable for FRα testing.
- A minimum of 50-100 tumor nuclei present

For large biopsies, try to submit at least 30 to 40 sections from 6 to 8 cores

Preparation and fixation of specimens

Fixative	10% neutral buffered formalin (NBF) is preferred, but others will be accepted.	
	Fixation time should not exceed 72 hours.	
	Fixative should be freshly diluted from stock within the previous 24 hours.	
	Fixation should take a suggested minimum of 6 hours and a maximum of 72 hours. This will help reduce fixative artifacts from over-fixation which can adversely affect the success of genetic testing.	
	Fixative penetrates tissue at a rate of ~1mm/hr. Large specimens should be opened or incised to promote formalin penetration and reduce autolysis, which can adversely affect the success of testing.	
	Cytology specimens must be spun, embedded into cell blocks and fixed in formalin. They can then be assessed for neoplastic cell content the same way as tissue specimens.	
Collection	**Specimen Handling**	Specimens should be handled using a 'genome-friendly' protocol that minimizes nucleic acid damage, but maximizes nucleic acid recovery while also preserving tissue morphology.
	Resection Specimen	Resection specimens should be delivered to pathology and undergo specimen selection ideally within 1 hour of surgical excision.
	Biopsy specimen	Recommended to obtain additional core with a dedicated block for Myriad testing.
	Biopsy to fixative time	Tissue should go directly into fixative or degradation can occur.
	Ratio of fixative to tissue	10:1 ideal, 15:1 minimum. Tissue should be fully covered by fixative.
	Type of tissue	Ensure normal tissue is sampled before abnormal tissue to minimize contamination. Frozen tissue is accepted (not preferred).
	Fixation before processing time	At least 8 hours but less than 36 hours is optimal for DNA*. *Fixation times longer than 72 hours should only be used when characteristics of the specimen demand it.
Processing	**Chemical 1 on processor**	10% NBF preferred. Time here counts against time in fixative (less than 36 hours total).
	Chemical 2 on processor	Alcohol is standard in increasing strengths to dehydrate tissue.
	Chemical 3 on processor (Clearing agent)	Xylene is preferred. (Let Myriad Customer Service know if substitute is used.)
	Processor run time	Typically runs overnight. Less than 4 hours not optimal.
MyChoice® CDx prep	**Slides or blocks**	DNA is more stable in blocks than slides, so blocks preferred.
	Slide prep	Uncharged slides preferred.
	Refrigeration	Ice block must be sent with the specimen to prevent the wax in the blocks/slides from melting. Heat can also damage DNA.
	Labeling	Specimen containers must be clearly labeled according to institutional standards with an acceptable set of unique identifiers corresponding to information on the accompanying test request form.

If you have any questions about your specimen submission or to obtain additional kits, please call our dedicated Myriad Genetics Customer Service at 877-283-6709 or email helpmed@myriad.com.

Myriad genetics®

myriad.com/oncology/precise / Myriad Genetics, Inc. / 322 North 2200 West, Salt Lake City, UT 84116