Pathology Diagnostic Consultation and Biomarker Requisition

REFERRING PHYSICIAN

Authorized Signature is Required

Physician Name (print):

Signature:

Email:

Clinic/Hospital:

Address:

Telephone: Fax:

NOTE: For requests on outside material the form must also be faxed to the outside Pathology Department

PATIENT INFORMATION

Medical Record No.:

Health Card No.:

Last Name:

First Name:

Date of Birth (yyyy/mm/dd):

Sex: M ◯ F ◯ Other ◯

SERVICE REQUESTED (Select one of the following)

- ☐ Diagnostic consultation / 2nd opinion **only** (complete Secton 1)
- ☐ Biomarker testing **only** (complete section 2)
- ☐ Diagnostic consultation **and** biomarker testing (complete Section 1 AND Section 2)

LOCATION OF PATHOLOGY MATERIAL AND CASE DETAILS

Originating Institution: ☐ LHSC/SJHC Other:

Original pathology case accession number(s):

Total Number of Slides *(if included)*: Total Number of Blocks *(if included)*: Date of procedure: (yyyy/mm/dd)

NOTE TO OUTSIDE PATHOLOGIST: There will be a delay for material older than 2 years to be retrieved from archive. Please send ONE representative block AND the corresponding H&E slide.

SECTION 1: DIAGNOSTIC CONSULTATION

Relevant subspecialty / disease site (e.g. GI, GYN, etc.):

Specific questions for the consulting pathologist:

NOTE TO OUTSIDE PATHOLOGIST: Please send only pertinent, relevant slides ± blocks, not the entire case unless relevant.

Send Material to:

Surgical Pathology Laboratory
University Hospital, Room A3-101
339 Windermere Road
London, Ontario | N6A 5A5
Ph: 519-663-2956 | Fax: 519-663-2930

London Health Sciences Centre
St. Joseph's Health Care London
Pathology and Laboratory Medicine

PATIENT INFORMATION

Medical Record No.: _____ Health Card No.: _____

Last Name: _____ First Name: _____

SECTION 2: BIOMARKER TESTING (See Supplemental Information of Indicated Tests)

Intestinal (colorectal or small bowel) adenocarcinoma:

- A1. Biopsy: Early stage (I or II) or unknown stage ☐
- A2. Biopsy: Advanced stage (III or IV) ☐
- A3. Surgical resection: node negative, no distant metastases ☐
- A4. Surgical resection: node positive or distant metastases ☐
- A5. Colonic adenocarcinoma with loss of MLHI/PMS2 by IHC ☐
- A6. Non-colorectal carcinoma with loss of MLH1/PMS2 by IHC ☐

Other GI Tumors:

- B1. Esophageal/gastroesophageal adenocarcinoma ☐
- B2. Gastric adenocarcinoma ☐
- B3. Pancreatic adenocarcinoma ☐
- B4. Biliary or gallbladder adenocarcinoma ☐
- B5. Unresectable locally advanced or metastatic cholangiocarcinoma (CCA) where FGFR2 directed therapy is being considered ☐
- B6. PD-L1 testing in GEJ or Gastric Cancer ☐

Breast Carcinoma:

- C1. Invasive mammary carcinoma ☐
- C2. Ductal carcinoma in situ ☐
- C3. Carcinoma requiring repeat HER2 testing ☐
- C4. Testing on advanced/metastatic breast cancer where PIK3CA directed therapy is being considered ☐
- C5. PD-L1 testing in triple negative breast cancer ☐
- C6. Ki67 testing to support targeted therapy ☐

Endometrial and Cervical Carcinoma:

- D1. Low grade endometrial carcinoma (Endometrioid adenocarcinoma, FIGO grade I or II) ☐
- D2. Endometrial carcinoma for biomarker and NGS testing (recommended for all high grade endometrioid carcinoma (grade 3) or non-endometrioid morphology; endometrial carcinoma with abnormal MMR and/or p53; or on resections if > stage 1A or LVI present regardless of histotype, if not previously per formed on biopsy) ☐
- D3. Endometrial carcinoma with loss of MLH1/PMS2 by IHC ☐
- D4. Serous endometrial carcinoma where HER2 directed therapies are being considered ☐
- D5. PD-L1 testing in Cervical Carcinoma ☐

Ovarian Tumor: *(check one)*

- E1. High grade serous adenocarcinoma ☐
- E2. Endometrioid, mucinous or clear-cell ovarian adenocarcinoma ☐
- E3.. Diagnosed or suspected sex-cord stromal tumors ☐
- E4. Diagnosed or suspected ovarian small cell carcinoma, hypercalcemic type ☐

Lung:

- F1. Non-squamous non-small cell lung carcinoma ☐
- F2. Lung squamous cell carcinoma ☐
- F3. Repeat testing after EGFR directed therapies ☐

Skin:

- G1. Sebaceous neoplasm ☐
- G2. Invasive melanoma T3 and above (Breslow > 2mm) or metastatic melanoma (including skin satellite nodules) ☐

Genitourinary:

- H1. Advanced prostate adenocarcinoma (including grade group ≥ 4, T stage ≥ pT3a, node positive or metastasis) ☐
- H2. Ureter carcinoma ☐
- H3. Adrenal carcinoma ☐
- H4. Advanced urothelial carcinoma where FGFR2/3 inhibitor therapy is being considered ☐

CNS:

- I1. Adult patients with astrocytic and oligodendroglial tumours, including glioblastomas ☐

CNS: *(check one if applicable)*

- I2. Grade IV glial tumors in patients > 55 ☐
- I3. Grade III glial tumors patients >55 and IDH wild type ☐
- I4. Grade III glial tumors patients ≤ 55 ☐

Head and Neck:

- J1. Uveal melanoma ☐
- J2. Squamous cell carcinoma, metastatic (beyond neck lymph nodes) ☐
- J3. Squamous cell carcinoma, recurrent and/or unresectable ☐
- J4. Thyroid cancer, metastatic (beyond regional neck lymph nodes ☐
- J5. Thyroid cancer radio-iodine refractory ☐
- J6. Medullary thyroid cancer ☐
- J7. Anaplastic thyroid cancer ☐

NTRK Testing:

- K1. Advanced/metastatic solid tumour cancers where NTRK directed therapy is being considered ☐
- K2. Soft tissue sarcoma, salivary carcinoma, CNS tumor, secretory breast cancer or mammary analogue secretory carcinoma where NTRK directed therapy is being considered ☐

SUPPLEMENTAL INFORMATION

Mismatch repair (MMR) protein IHC (MLH1, MSH2, MSH6, PMS2) testing is indicated in the following:
small bowel, colorectal, esophageal gastroesophageal, gastric, pancreatic, gallbladder, and endometrial adenocarcinomas.
Ovarian carcinoma, sebaceous neoplasms, ureter carcinoma and adrenal carcinomas.
Note: this is reflex testing in these indications and is performed on tumors of any stage. Tumors found to have deficiencies in MLH1/PMS2 will automatically be triaged for additional BRAF and or MLH1 methylation testing.
ER/PR/HER2 IHC is indicated in invasive mammary carcinoma. ER only is performed in ductal carcinoma in situ.
HER2 testing is indicated in gastroesophageal and gastric and high grade/serous endometrial cancer
AR testing is indicated advanced/metastatic prostatic adenocarcinoma
PD-L1 testing is indicated in non-small cell lung, gastroesophageal, gastric, triple negative breast carcinomas and metastatic, unresectable or recurrent head and neck or cervical squamous cell carcinomas
Ki-67 testing is indicated for HER2 negative, hormone receptor positive, node positive, early breast cancer at high risk of disease recurrence where targeted therapy is being considered
MLH1 methylation/ BRAF testing is indicated in small bowel/colorectal adenocarcinomas with loss of MLH1/PMS2 by IHC.
MLH1 methylation testing is indicated in endometrial cancer with loss of MLH1/PMS2 by IHC
MGMT methylation testing is indicated in Grade IV glial tumors in patients > 55 , Grade III glial tumors patients >55 and IDH wild-type, and Grade III glial tumors patients ≤ 55.

NGS panel testing is indicated in the following indications and covers the following genes:

Disease site	Indication	Genes tested
Colorectal and small bowel adenocarcinoma	Stage III and above	BRAF, KRAS, NRAS, PIK3CA, PTEN
Lung	Non-squamous NSCLC	ALK, BRAF, EGFR, ERBB2, KRAS, MET, NRAS, PIK3CA, SMARCA4, TP53, FGFR1, FGFR2, FGFR3, MET *(including exon 14 skipping)*, NTRK1, NTRK2, NTRK3, RET, ROS1
Melanoma	invasive melanoma T3 and above or uveal melanoma	BRAF, KIT, NRAS, GNAQ, GNA11
Endometrial carcinoma	Endometrial adenocarcinoma recommended for grade II and above	POLE, KRAS, PIK3CA, PTEN, CTNNB1, TP53
Thyroid	Metastatic, iodine refractory, medullary or anaplastic	BRAF, KRAS, HRAS, NRAS, RET, NTRK1, NTRK2, NTRK3, PPARG
Glioma	Adult patients with astrocytic and oligodendroglial tumours, including glioblastomas	ATRX, BRAF, IDH1, IDH2, FGFR1, FGFR2, FGFR3, TERT, TP53, H3F3A
Ovary	High-grade including serous and clear cell	BRCA1, BRCA2
Ovary	Ovarian small cell carcinoma	SMARCA4
Ovary	Sex-cord stromal tumors	FOXL2, DICER
Breast	Advanced Breast cancer where PIK3CA directed therapies is being considered	PIK3CA, ESR1
Bladder	Advanced urothelial carcinoma where FGF directed therapies are being considered	FGFR2, FGFR3
Prostate	Advanced/metastatic prostate carcinoma	ATM, BRCA1, BRCA2, PALB2
Pan-Cancer	NTRK therapy	NTRK1, NTRK2, NTRK3