

TUMOUR MARKER LABORATORY
(Affiliated with the BC Cancer Agency)

PHSA Laboratories – Central Processing & Receiving
655 West 12th Avenue Vancouver BC V5R 4R4
Phone: 604-707-2844 Fax: 604-707-2407

Hours of Operation: Monday to Friday, 0800 to 1600 hours (excluding statutory holidays)
Medical Lead: Dr. Morris Pudek 604-875-4578 Team Lead: Annie Mak 604-707-2828

ASSAY INFORMATION FOR REFERRING LABORATORIES (updated 19 Apr 2019)

Test	Primary Use	Secondary Use	Specimen	Primary Collection Tube	Preanalytical Sample Handling	Testing Frequency	Assay Method	Reference Range
<u>AFP</u> Alpha Fetoprotein	Hepatoma, Non-Seminomas of Testes	Liver metastases	1 mL aliquot serum	Gold or Red top	Should arrive in lab within 48 hrs. Prior to shipping, store refrigerated (up to 48 hours) or frozen (if testing will be delayed >48 hrs).	Daily as received	Siemens CENTAUR (chemi-luminescence immunoassay)	≤8 µg/L
<u>B2M</u> Beta-2-Microglobulin	Lympho-proliferative diseases eg: Multiple Myeloma, Lymphoma, Leukemia, AIDS Lymph-adenopathy	Inflammatory disorders eg: Arthritis, SLE, Crohn's; renal glomeruli dysfunction; renal transplant monitoring	1 mL aliquot serum or heparin or EDTA plasma	Gold, Red, Green or Mauve top	Should arrive in lab within 48 hrs. Prior to shipping, store refrigerated (up to 24 hours) or frozen (if testing will be delayed >24 hrs).	Weekly	Siemens Immulite (chemi-luminescent immunometric assay)	Serum: <2.2 mg/L
<u>CA 125</u> Cancer Antigen 125	Ca Ovary	Ca Uterus, Pancreas, Lung, Breast, Stomach, Hepatoma	1 mL aliquot serum	Gold or Red top	Should arrive in lab within 48 hrs. Prior to shipping, store refrigerated (up to 24 hours) or frozen (if testing will be delayed >24 hrs).	Daily as received	Siemens CENTAUR (chemi-luminescence immunoassay)	≤35 kU/L
<u>CA 15-3</u> Cancer Antigen 15-3	Ca Breast	Ca Lung	1 mL aliquot serum	Gold or Red top	Should arrive in lab within 48 hrs. Prior to shipping, store refrigerated (up to 24 hours) or frozen (if testing will be delayed >24 hrs).	Daily as received	Siemens CENTAUR (chemi-luminescence immunoassay)	≤32 kU/L
<u>CA 19-9</u> Carbohydrate Antigen 19-9	Ca Pancreas, Stomach, Biliary Tract, Colorectum	Ca Liver, Bronchus, Uterus, Breast, Ovary (mucinous)	1 mL aliquot serum	Gold or Red top	Should arrive in lab within 48 hrs. Prior to shipping, store refrigerated (up to 48 hours) or frozen (if testing will be delayed >48 hrs).	Daily as received	Siemens CENTAUR (chemi-luminescence immunoassay)	≤37 kU/L

Test	Primary Use	Secondary Use	Specimen	Primary Collection Tube	Preanalytical Sample Handling	Testing Frequency	Assay Method	Reference Range
CEA Carcinogenic Embryonic Antigen	Ca Colorectal	Ca Breast, Lung	1 mL aliquot serum	Gold or Red top	Should arrive in lab within 48 hrs. Prior to shipping, store refrigerated (up to 24 hours) or frozen (if testing will be delayed >24 hrs).	Daily as received	Siemens CENTAUR (chemiluminescence immunoassay)	$\leq 5 \mu\text{g/L}$
CGA Chromogranin A	Neuroendocrine tumours including Carcinoid, Pheochromocytoma, Neuroblastoma, islet cell tumours	Small Cell Ca Lung, Ca Prostate with normal PSA	1 mL aliquot serum or heparin or EDTA plasma	Gold, Red, Green or Mauve top	Should arrive in lab within 48 hrs. Prior to shipping, store refrigerated (up to 7 days) or frozen.	Weekly	Cisbio ELISA	$< 94 \mu\text{g/L}$
GSTN Gastrin	Zollinger-Ellison tumours (gastrinomas) in patients with gastric acid hypersecretion.	Disorders associated with abnormal gastrin production	1 mL aliquot serum or heparin or EDTA plasma	Gold, Red, Green or Mauve top	Should be separated and frozen within 1 hour of collection. Ship frozen.	Weekly	Siemens Immulite (chemiluminescent immunometric assay)	$< 115 \text{ ng/L}$
HCG Total Human Chorionic Gonadotropin	Samples referred to Vancouver General Hospital							
IL2R Soluble Interleukin-2 Receptor	Hemophagocytic lymphohistiocytosis syndrome	Neoplastic diseases, Autoimmune diseases, Organ allograft rejection	1 mL aliquot serum or heparin or EDTA plasma	Gold, Red, Green or Mauve top	Should be separated and frozen within 1 hour of collection. Ship frozen.	Weekly/Stat with Medical Lead approval	Siemens Immulite (chemiluminescent immunometric assay)	$\leq 19 \text{ yrs:}$ No reference range $> 19 \text{ yrs:}$ 241-846 U/mL
PSA-Free Prostate Specific Antigen (protein-unbound fraction)	Ca Prostate, BPH		1 mL aliquot serum or Li-heparin, EDTA or Citrate plasma	Gold, Red, Green, Mauve or Blue top	Obtain sample prior to procedures involving manipulation of the prostate. Should arrive in lab within 48 hrs. Prior to shipping, store refrigerated (up to 5 days) or frozen.	Daily as received	Roche E411 (electrochemiluminescence immunoassay)	Variable

Test	Primary Use	Secondary Use	Specimen	Primary Collection Tube	Preanalytical Sample Handling	Testing Frequency	Assay Method	Reference Range
PSA-Total Prostate Specific Antigen (protein-bound and -unbound fractions)	Ca Prostate, BPH		1 mL aliquot serum or Li-heparin, EDTA or Citrate plasma	Gold, Red, Green, Mauve or Blue top	Obtain sample prior to procedures involving manipulation of the prostate. Should arrive in lab within 48 hrs. Prior to shipping, store refrigerated (up to 5 days) or frozen.	Daily as received	Roche E411 (electrochemiluminescence immunoassay)	<50 yrs: ≤2.5 µg/L 50-59 yrs: ≤3.5 µg/L 60-69 yrs: ≤4.5 µg/L ≥70 yrs: ≤6.5 µg/L
SCC Squamous Cell Carcinoma	Ca Cervix, Uterus	Ca Anus, Vagina, Vulva, Esophagus, Skin	1 mL aliquot serum or Na-heparin or EDTA plasma	Gold, Red, Green or Mauve top	Should arrive in lab within 48 hrs. Prior to shipping, store refrigerated (up to 7 days) or frozen.	Daily as received	Abbott ARCHITECT (chemiluminescence immunoassay)	≤1.5 µg/L
Test Testosterone	Ca Prostate	Endocrine disorders	1 mL aliquot serum or EDTA plasma	Gold, Red or Mauve top	Should arrive in lab within 48 hrs. Prior to shipping, store refrigerated (up to 7 days) or frozen.	Daily as received	Roche E411 (electrochemiluminescence immunoassay)	Males: <50 yrs: 8.6-29 nM ≥50 yrs: 6.7-26 nM Females: <50 yrs: 0.3-1.7 nM ≥50 yrs: 0.1-1.7 nM