# Upper Gastrointestinal Cancer – Part 3 – Hepatobiliary

**Effective Date: October 2026**

## SCOPE

Part 3 of this 3-part guideline outlines recommendations for the prevention, screening, diagnosis, management and follow-up of hepatocellular, gallbladder, and cancer of the intra- and extrahepatic biliary tract. The primary audience for this guideline is family physicians (FPs) and nurse practitioners (NPs) providing first contact or primary healthcare, as well as general practitioners in oncology (GPOs).

## METHODOLOGY

The development of this guideline was sponsored by BC Cancer, Provincial Health Services Authority (PHSA). The recommendations were developed by a working group with representation from FPs/NPs (including from rural, urban, and Indigenous clinical practice), a GPO, as well as specialists in medical, radiation, and surgical oncology and hepatology.

A systematic and reproducible approach to the evidence was used including a rapid review of clinical evidence, which was sourced from 2016 to April 2026. The following databases were searched: Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, Ovid MEDLINE(R) and Embase. Additional searches were completed when other clinical questions were raised, and all sourced evidence was evaluated using the principles of the *Oxford Centre for Evidence-Based Medicine (OCEBM) Levels of Evidence*.[1]

The development of the recommendations in this guideline was through careful consideration of the evidence, as well as the application of clinical expertise including a peer review process to arrive at consensus for each recommendation. For a detailed list of the research questions applied, search terms used and the results including a PRISMA flow table and results summary for this rapid review, please contact the BC Cancer Primary Care Program – Family Practice Oncology Network.[2]

## KEY RECOMMENDATIONS

- Painless jaundice should be considered liver or biliary cancer until proven otherwise
- ***Hepatitis B vaccination*** has been shown to significantly ***reduce the risk of hepatocellular carcinoma (HCC)*** and should be done in newborns and in adults at high risk if they have not been vaccinated before
- ***Antiviral treatment*** for hepatitis B virus (HBV) or hepatitis C virus (HCV) infection significantly decreases the risk of cirrhosis and cancer
- Patients presenting with symptoms indicative of hepatobiliary cancer should be referred urgently to a specialist
- Ultrasound (US) of the abdomen may be considered as the ***initial imaging***

modality

- Triphasic computed tomography (CT) of the liver is the ***next imaging*** modality if US is inconclusive; the referring practitioner should specify ***liver CT for hepatocellular carcinoma*** on the requisition
- A significant mass found on imaging should prompt an urgent referral to a specialist; the referring practitioner should specify ***possible malignant mass on imaging*** on the referral letter
- Patients facing potentially life-limiting conditions may benefit from advance care planning

## BACKGROUND

### Background on Liver, Gallbladder, and Biliary Tract Cancers

Liver and intrahepatic bile duct cancer is the seventh most common cancer worldwide, and the third leading cause of cancer-related mortality, with incidence rates three times higher in men than in women.[3] Gallbladder cancer (GBC) is the 22nd most common cancer worldwide, and the 20th leading cause of cancer-related mortality.[3] In British Columbia (B.C.), the age-standardized cancer incidence rate for liver and intrahepatic bile duct is low with 13.7 for males and 6.3 for females, cases per 100,000. [4]

#### *Hepatocellular Carcinoma*

The vast majority of HCC occurs in the setting of underlying cirrhosis, and patients with multiple risk factors are at significantly greater risk than those with individual risk factors. Risk factors that increase the risk of HCC include:

- HBV and HCV infections[5]
- alcohol consumption[6,7,8]
- nonalcoholic fatty liver disease (NAFLD)/metabolic dysfunction-associated steatotic liver disease (MASLD)[9,10,11,12,13,14,15,16]
- genetic conditions including:
    - hemochromatosis[17]
    - alpha-1 antitrypsin deficiency[18]
- autoimmune hepatitis[19,20]
- primary biliary cholangitis[21,22]
- environmental risk factors including aflatoxin exposure[23,24,25,26]

#### *Cholangiocarcinoma*

Cholangiocarcinoma is a malignancy arising from the biliary ductal epithelium. It can arise in intra-hepatic or extrahepatic biliary ducts. Extrahepatic lesions may present as obstructive jaundice, while intrahepatic lesions may be mistaken for HCC or metastatic disease from an unknown primary site. The incidence of bile duct cancer peaks in the seventh decade and occurs slightly more frequently in men than in women.[27] Prevalence is higher in Southeast Asia and may be related to chronic parasitic infection of the liver (i.e., liver flukes - *Clonorchis sinensis* and *Opisthorchis viverrini*).[27,28,29] Parasitic infection of bile ducts is a strong risk factor for cholangiocarcinoma, with an odds ratio (OR) of 4.49 for *C. sinensis* and 3.69 for *O. viverrini*.[28,30,31,32] Inflammatory bowel disease may increase the risk of developing liver cancer, as well as possible exposure to environmental toxins (i.e., dioxins, asbestos, nitrosamines, Thorotrast).[27,33,34] The presence of gallstones may be associated with an increased risk of biliary tract

cancer, GBC, and extrahepatic bile duct cancer.[35]

While some GBCs are discovered incidentally at the time of a cholecystectomy, most present with late-stage disease. Risk factors that increase the risk of cancer of the gallbladder include:

- chronic inflammation of the gallbladder mucosa[36]
- adenomatous gallbladder polyps[36,37]
- HBV/HCV infections have also been shown to increase the risks of intrahepatic and extrahepatic cholangiocarcinoma[38]
- tobacco products[30,39,40]
- age
- female sex[3]

## PREVENTION

The following are considerations that may influence the lifetime risk of hepatobiliary cancer in asymptomatic patients:

### *Primary Prevention*

- Hepatitis B vaccination has been shown to significantly reduce the risk of HCC, and hepatitis B vaccine given at birth shows excellent protective effects in preventing the development of liver cancer and reducing mortality from liver cancer and liver diseases.[41]
- HBV/HCV can be transmitted with exposure to blood and bodily fluids. Sexual transmission can be reduced with the use of condoms. Transmission in the intravenous substance use population through contaminated needles can be reduced through safe supply of clean needles.
- Antiviral treatment for HBV or HCV infection significantly decreases the risk of cirrhosis, which is an established risk factor for HCC, and remains one of the most effective methods of primary prevention.[17,42,43]
- Hemochromatosis patients are at increased risk of cirrhosis, which is a risk factor for HCC.[17] Iron removal by phlebotomy therapy improves survival including in liver cirrhosis.[17]

### *Lifestyle Modifications*

- Reducing Alcohol Consumption
    - Patients who consume higher amounts of alcohol (>5-7 drinks/day) are at increased risk for intrahepatic cholangiocarcinoma and HCC.[8,40]
    - The combined effect of alcohol + HBV and/or + HCV infection, is associated with significantly greater risk of HCC, when compared to the individual risks alone.[44]
    - Refer to the BC Guidelines clinical practice guideline on *High-Risk Drinking and Alcohol Use Disorder* (see *Resources*).
- Smoking Cessation
    - Smoking is an established risk factor for the incidence of and mortality from HCC[45,46]
    - The evidence is mixed; however, smoking has been associated with a moderately but significantly higher risk of GBC for current, but not former smokers[40,47]
    - Ever, former, and current smoking is associated with increased extrahepatic bile duct

cancer, and current smoking and smoking intensity is also associated with intrahepatic bile duct cancer[40]

- The combined effect of smoking + HBV and/or + HCV infection, is associated with significantly greater risk of HCC (OR =19.8 for HBV, 24.9 for HCV, and 32.6 with coinfection)[48]
- Refer to the BC Guidelines clinical practice guideline on *Tobacco Use Disorder* (see *Resources)*

- Weight Management*
  - Optimize the management of metabolic syndrome to reduce fatty liver disease as a risk factor for cirrhosis and HCC. Refer to the *European Association for the Study of the Liver* for clinical practice guidelines on MASLD, and the *American Association for the Study of Liver Diseases* guidelines for the assessment and management of NAFLD, and for the assessment of hepatic fibrosis and steatosis (see *Resources*)
  - Obesity but not overweight may have an independent relationship with up to 1.8-fold risk of hepatocellular cancer-related mortality.[49] Obesity in males is found to have a greater level of increased risk as compared to females[49,50]
  - Adiposity was positively associated with biliary tract cancer risk.[51] Compared to a body mass index (BMI) of 18.5-24.9, a BMI of 30-34.5 was associated with a 44% increase and ≥35 with a 71% increase in risk[51]
  - Excess body weight is associated with an increased risk of GBC and extrahepatic bile duct cancer.[30,52] Refer to the BC Guidelines clinical practice guideline on *Overweight and Obese Adults: Diagnosis and Management,* for weight management recommendations (see *Resources*).
- Physical Activity*
  - Meta-analyses have shown physical activity to be inversely related to the risk of liver cancer and liver cancer mortality[53,54,55]
  - Physical activity has also been shown to be inversely related to the risk of intrahepatic cholangiocarcinoma[51]

*Primary care providers should refer patients to HealthLink BC, 811 for dietary recommendations (see *Resources*), and for physiotherapy for exercise recommendations.

### *Travel Considerations*

- Patients traveling to regions where HBV/HCV are endemic should be aware of their individual level of risk upon return from travel and plan HBV immunization if needed prior to departure.
- Patients traveling to regions where liver flukes are endemic should be aware of and avoid **foodborne** or **waterborne** routes of infection

### *Emerging Evidence*

- Meta-analysis of case-control studies has shown a significant association between *Helicobacter pylori* infection and biliary tract cancer (OR, 2.57), with the prevalence of *H. pylori* found to be higher in Asian and North American populations.[56] Systematic review with meta-analysis shows a significant association between *H. pylori* infection and hepatobiliary cancer risk, and subsequent increased susceptibility to hepatobiliary cancer (OR, 2.63).[57] *H. pylori* was also found to be associated with biliary tract cancer (OR, 2.67) and cancer of the liver (OR, 5.13) in an umbrella review of meta-analyses of observational studies.[58]

## SCREENING – RECOMMENDATIONS FOR PATIENTS WITH INCREASED RISK FACTORS

***Screening in asymptomatic patients is not recommended*** but could be considered in patients with increased risk factors.

### *Consider Screening in Patients with the Following Increased Risk Factors for Hepatocellular Carcinoma*

- ***Cirrhosis of any cause*** and including any patients who have been treated for hepatitis and have achieved seroconversion
- Among patients without cirrhosis, consider screening the following hepatitis B patients:[59,60]
    - Men aged 40 years or older (latency period can be decades, following hepatitis exposure prior to changes leading to HCC)
    - Women aged 50 years or older (latency period can be decades, following hepatitis exposure prior to changes leading to HCC).
    - Persons who were born in or were a young child raised in Central and Western Africa, who following immigration are now aged 30 years or older (due to risk associated with certain African HBV genotypes and environmental risk factors including aflatoxin exposure).
    - First-degree family history of HCC (starting at age 40 or 10 years before affected first-degree family member, whichever is sooner)
    - All human immunodeficiency virus (HIV)-coinfected patients (starting at age 40)
    - All HBV/HDV coinfected individuals (starting at age 40, or earlier if advanced >F3 [stage 3] fibrosis)
- Recommended screening investigations ***for patients at increased risk*** of hepatocellular carcinoma:
    - US every 6 months + alpha-fetoprotein (AFP), ***OR***
    - Liver magnetic resonance imaging (MRI) every 6 months + AFP (*if not already completed*) (If US visualization is poor, or if MRI is otherwise indicated)

### *Consider Screening in Patients at Increased Risk of Biliary Tract and Gallbladder Cancer*

- Primary sclerosing cholangitis is an independent risk factor for intrahepatic cholangiocarcinoma (OR, 7.5), extrahepatic cholangiocarcinoma (5.6) and GBC (2.1)[40]
- Choledochal cysts significantly increase the risk of biliary tract cancer, for intrahepatic cholangiocarcinoma (OR, 26.7) and extrahepatic cholangiocarcinoma (OR, 34.9)[61]
- Recommended screening investigations ***for patients at increased risk*** of biliary tract and gallbladder cancer:
    - Liver MRI and magnetic resonance cholangiopancreatography (MRCP) annually for biliary tract cancer
    - US is better for detecting GBC, when indicated
    - Screening using liver enzymes or tumour markers is not currently recommended

## HEREDITARY CANCER

### *Mainstream Testing OR Hereditary Cancer Program Referral*

The ***BC Cancer Hereditary Cancer Program (HCP) Eligibility Criteria*** outlines eligibility for publicly funded genetic counseling and/or testing in BC and the Yukon.[62] This resource is intended to be used by healthcare professionals as a guide for ***when to offer genetic testing directly to their patients (mainstream genetic testing) and/or when to refer to the HCP***. If a person is eligible for mainstream testing, this is usually the fastest pathway for nonurgent genetic test results. These criteria are intended to capture the individuals and families most likely to have a germline pathogenic variant in a hereditary cancer gene. These guidelines may change over time as evidence and testing technology evolve. Information and resources are available for health professionals to use when discussing hereditary cancer assessment with patients/families (see *Resources*).

### *Hereditary Biliary Tract Cancer*

Of biliary tract cancers, 8-12% are associated with germline pathogenic variants, most commonly *BRCA1/BRCA2*. Others may include *PALB2, APC, MLH1, MSH2, MSH6, BAP1, ATM, RAD51D*.[63,64,65]

### *Indications for HCP Referral for Biliary Tract Cancer*

For asymptomatic patients at increased risk, consider referral to the HCP for asymptomatic patients who have a personal or family history of risk factors for biliary tract cancer – including intrahepatic cholangiocarcinoma, extrahepatic cholangiocarcinoma, and GBC – who meet the following criteria:[62]

1. Personal history of biliary tract cancer ≤50 years of age
2. Personal history of biliary tract cancer at any age ***AND***:
    a. Personal history of multiple primary cancers (excluding non-melanoma skin cancer (may include sebaceous carcinoma in consideration of Lynch syndrome)), ***OR***
    b. Ashkenazi Jewish ancestry – or provide information on the Jewish BRCA testing program through BRCAinBC (see *Resources*).
3. A close relative that meets the above criteria (i.e., first or second-degree blood relatives on

the same side of the family: children, siblings, parents, aunts/uncles, grandparents, grandchildren)

## DIAGNOSIS

Diagnosis is difficult as many of the symptoms of these cancers are nonspecific and can mimic benign or other malignant conditions (e.g., ovarian cancer, gastric cancer, primary peritoneal cancer). Often these cancers are found incidentally with imaging.

### Signs and Symptoms

The two most common presenting symptoms are abdominal pain and jaundice. Painless jaundice is considered to be cancer until proven otherwise. Persistent abdominal pain and ongoing weight loss should prompt appropriate investigations. Other non-specific symptoms include:

- Fatigue, anorexia, weight loss, dull epigastric pain, early satiety
- Abdominal pain, back pain, or weight loss are usually signs of late-stage disease

#### *Investigations for Hepatocellular, Gallbladder, and/or Cancer of the Intra- and Extrahepatic Biliary Tract*

Most of these investigations can be arranged by the primary care provider. It is preferable to have the following tests ordered at the time of referral so that the results are available at the time of consultation:

- US of the abdomen is considered as the ***initial imaging*** modality
- Triphasic CT of the liver is the ***next imaging*** modality if US is inconclusive
- Laboratory testing should include a complete blood count (CBC), estimated glomerular filtration rate (eGFR) (prior to CT), liver function (aspartate aminotransferase (AST), alanine aminotransferase (ALT), bilirubin, albumin, alkaline phosphatase (ALP)) and international normalized ratio (INR) as well as AFP, carcinoembryonic antigen (CEA) and CA 19-9 tumour markers

***Consider a referral*** to a specialist for patients with:

- abnormal abdominal imaging
- unexplained persistent liver enzyme elevations

#### *Indications for an Urgent Referral to a Specialist*

The presence of the following ***alarm symptoms*** – alone or in combination – should prompt urgent referral to a specialist:

- asymptomatic jaundice
- unexplained weight loss
- a significant mass found on imaging should prompt an urgent referral to a specialist; the referring practitioner should specify ***possible malignant mass on imaging*** on the referral letter

## STAGING

The TNM (tumour-node-metastasis) classification system is the international standard and can be used for each of these cancers.[66] Refer to BC Cancer for a link to staging diagrams and definitions for T, N, and M descriptors (see *Resources*). The Barcelona Clinic Liver Cancer (BCLC) staging is an international standard and is typically used to guide the treatment options according to staging for HCC.[67]

## TREATMENT

Treatment will be recommended by the surgeon and the oncologist/BC Cancer team. The BC Cancer Gastrointestinal Tumour Group has created clinical care pathways including liver cancer/HCC, to support all health care professionals, community health care teams and patients (see *Resources)*.

Clinical Care Pathways for Health Professionals

Tumour specific treatment details can be found at:

Gastrointestinal Tumour Group - Liver/HCC Pathway

The hepatobiliary or general surgeon, medical or radiation oncologist will plan optimal therapy. HCC treatment may include multiple points of engagement with a multi-disciplinary care team, and care providers are encouraged to view the care pathways to understand where these points are in the treatment. Symptom management can be determined by medical oncology, radiation oncology, gastroenterology, and surgical oncology. Metastatic disease may present an incurable situation, and palliative measures may then be appropriate.

The palliative approach to care recommends discussing patient preferences, prognosis, and quality of life factors with the patient and family. Refer to the Family Practice Oncology Network (FPON) guidelines on the *Palliative Approach to Care, Pain and Symptom Management, and Grief and Bereavement* (see *Resources)*. Symptom management, best supportive care, and involvement of palliative care services are recommended as indicated by the patient's clinical status.

## FOLLOW-UP

Patients who have completed treatment may be returned to the care of their primary care provider who will be asked to manage their follow-up care. Follow-up care may include:

- Surveillance for recurrent disease or late effects of treatment when indicated
- Monitoring and treating complications and/or side-effects
- Providing patient support
- Symptom management, best supportive care, and the involvement of palliative services

Patients with a life-limiting disease or illness may benefit from the development of an advance care plan (ACP) that incorporates the patient's values and personal goals, indicates potential outcomes, and outlines linkages with other healthcare professionals that would be involved in the care and their expected roles. The ACP is an opportunity to also identify the patient's alternate substitute decision maker or legal health representative.

***Specific recommendations will be provided on the patient's discharge letter.*** At any time, the patient and/or primary care provider may consult with BC Cancer for any follow-up questions or concerns. Patients should be encouraged to keep their immunizations up to date (see *Resources)*.

### *Equity and Access*

Consider regional limitations in accessing services and individual patient barriers to care. Consider the applicability of a trauma-informed approach for patients who may require additional support in order to feel safe, or to develop trusting relationships with healthcare services or providers.[68] A trauma-informed approach may enable practitioners to work in partnership with patients and to empower them to make choices about their health and wellbeing.[68]

BC Cancer has created tumour specific clinical care pathways including a *Liver/Hepatocellular Carcinoma (HCC) Pathway* (see *Resources*). These pathways are designed to support all health professionals to guide best practice, and to ensure that quality care is provided equitably to all patients across the province. These pathways support communication and decision-making within healthcare teams, to guide the development of clinical benchmarks and performance indicators, and to enable tumour-specific reporting. Healthcare providers are encouraged to use these resources to guide patients along the cancer trajectory for tumour-specific cancer care.

*Provincial Language Services* (PHSA) provides language services to health authorities, family practice practitioners, specialist offices and other allied health professionals in B.C. (see *Resources*). Interpreting services are intended to reduce or eliminate language barriers wherever possible and are designed to enable two-way communication that optimizes the delivery of safe and equitable care. Services are provided in more than 200 languages and are available 24/7 at no charge to patients and/or their families. Sign language interpreting, intervenor, and *Communication Access Realtime Translation* (CART) services are available for deaf, deaf-blind and hard-of-hearing patients when accessing most healthcare services in B.C.

### *Indigenous Patient Navigators*

Indigenous patient navigators (IPNs) are available at PHSA to support culturally safe experiences for Indigenous Peoples. IPNs collaborate with Indigenous Peoples and their families to ensure access to high-quality care that is trauma-informed, culturally safe and free of racism and discrimination. For more information about IPNs or for information on how patients can self-refer for these services, refer to the *Resources* section.

## DISCLAIMER

This guideline is intended to provide guidance to primary healthcare providers in B.C. on the clinical management of upper gastrointestinal cancer. This guideline is not designed to replace professional judgment of a healthcare professional and is not to be considered a standard of care.

# RESOURCES

## ➢ HEALTHCARE PROVIDER AND PATIENT RESOURCES

- **BC Cancer**
  - **Hereditary Cancer Program**, referrals, Vancouver: 604-877-6000 (ext. 672198), Abbotsford: 604-851-4710 local 645174
    - Fraser Health Authority, **(F) 604.851.4720**, (T) 604.851.4710 local 645174
    - All other BC/Yukon, **(F) 604.707.5931**, (T) 604.877.6000 local 672198
    - HCP referral form, available at www.bccancer.bc.ca/coping-and-support-site/Documents/Hereditary%20Cancer%20Program/HCP%20Referral%20Form.pdf
    - Hereditary Cancer Program Eligibility Criteria (*published March 9, 2026*), available at www.bccancer.bc.ca/coping-and-support-site/Documents/Hereditary%20Cancer%20Program/HCP%20Eligibility%20Criteria.pdf
    - HCP Mainstream Genetic Testing: information and requisition, available at https://cancergeneticslab.ca/hereditary-cancer/mainstreamed-testing/
    - BRCAinBC, Provides education on the BRCA genes and genetic testing options available to British Columbians, available through the BC Cancer HCP, available at https://brcainbc.ca
  - Family Practice Oncology Network Guidelines, www.bccancer.bc.ca/health-professionals/networks/family-practice-oncology-network/guidelines-protocols
    - Palliative Approach to Care (2017)
    - Pain and Symptom Management (2017)
    - Grief and Bereavement (2017)
  - **Gastrointestinal Tumour Group Clinical Pathways**, www.bccancer.bc.ca/health-professionals/clinical-resources/clinical-care-pathways
    - *Liver/Hepatocellular Carcinoma (HCC) Pathway*, available at *www.bccancer.bc.ca/Documents/Liver-HCC%20Clinical%20Care%20Pathway_Published.pdf*
- **BC Centre for Disease Control**
  - Guidelines for the immunization of individuals at high risk for vaccine-preventable diseases, available at www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/immunization/immunization-of-special-populations
- **BC Guidelines**
  - *Abnormal Liver Chemistry - Evaluation and Interpretation*, available at www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/abnormal-liver-chemistry
  - *High-Risk Drinking and Alcohol Use Disorder***,** available at www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/high-risk-drinking-and-alcohol-use-disorder
  - *Tobacco Use Disorder (TUD)*, available at www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/tobacco-use-disorder
  - *Viral Hepatitis Testing,* available at www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/hepatitis

- **Canadian Cancer Society**
    - Supportive care (physical, practical, emotional and spiritual) resources:
        - Supportive care for liver cancer, available at https://cancer.ca/en/cancer-information/cancer-types/liver/supportive-care
        - Supportive care for biliary tract cancers, available at https://cancer.ca/en/cancer-information/cancer-types/biliary-tract-gallbladder-and-bile-duct/supportive-care
- **U.S. Centers for Disease Control and Prevention (CDC)**
    - *About Liver Flukes,* available at www.cdc.gov/liver-flukes/about/index.html
- **Trauma-Informed Care Resources**
    - Trauma-Informed Practice (TIP) – Resources, available at www2.gov.bc.ca/gov/content/health/managing-your-health/mental-health-substance-use/child-teen-mental-health/trauma-informed-practice-resources
    - *Trauma-Informed Approaches in the Context of Cancer Care in Canada and the United States: A Scoping Review*, available at https://pmc.ncbi.nlm.nih.gov/articles/PMC10594848/
- **British Columbia Ministry of Health**
    - *My Voice–Expressing My Wishes for Future Health Care Treatment–Advance Care Planning Guide*, available at www2.gov.bc.ca/assets/gov/people/seniors/health-safety/pdf/myvoice-advancecareplanningguide.pdf
    - Provincial advance care planning resources, available at www.gov.bc.ca/advancecare
- **HealthLink BC**, www.healthlinkbc.ca, 8-1-1 (toll free in B.C.), 7-1-1 (deaf and hearing-impaired)
    - Recommended vaccines for adults, including patients with immunocompromising conditions, available at www.healthlinkbc.ca/health-library/immunizations/schedules/recommended-vaccines-adults
    - Find health care near you, access virtual health services, learn about primary care in British Columbia, or register for a family doctor or nurse practitioner, www.healthlinkbc.ca/find-care
- **Indigenous Cancer Control**
    - Improving Cancer Control for Indigenous People, Indigenous patient navigators at BC Cancer, www.bccancer.bc.ca/our-services/services/indigenous-cancer-control
    - Indigenous patient navigators by PHSA site – information is available at www.phsa.ca/our-services/programs-services/indigenous-health#Programs--&--services
- **Patient Resources**
    - BC Cancer – Supportive Care, available at www.bccancer.bc.ca/our-services/services/supportive-care
        - Nutrition Services, www.bccancer.bc.ca/our-services/services/supportive-care/nutrition
    - Canadian Association of Gastroenterology – Other GI Organizations
        - Canadian Nutrition Society/la Société canadienne de nutrition (CNS/SCN), available at https://cns-scn.ca
- **Pathways™**
    - Medical Care Directory, available at https://pathwaysmedicalcare.ca
    - Community Service Directory, available at https://pathwaysbc.ca/community

- **Primary Care Networks**, information is available at https://fpscbc.ca/what-we-do/system-change/primary-care-networks
- **Provincial Health Services Authority (PHSA)**
    - Indigenous Health, Patient Navigators, information available at www.phsa.ca/our-services/programs-services/indigenous-health
    - Provincial Language Service, (T) 604-297-8400, 1-877-BC Talks (228-2557) (toll free in B.C.), (F) 604-297-9304, available at www.phsa.ca/health-professionals/professional-resources/language-services

## ABBREVIATIONS

ACP – advance care plan
AFP – alpha-fetoprotein
ALP – alkaline phosphatase
ALT – alanine aminotransferase
AST – aspartate aminotransferase
B.C. – British Columbia
BMI – body mass index
CAR – Canadian Association of Radiologists
CART – Communication Access Realtime Translation
CBC – complete blood count
CEA – carcinoembryonic antigen
CT – computerized tomography
eGFR – estimated glomerular filtration rate
FPs – family physicians
FPON – Family Practice Oncology Network
GBC – gallbladder cancer
GEJ – gastroesophageal junction
GERD – gastroesophageal reflux disease
GPOs – general practitioners in oncology
*H. pylori* – *Helicobacter pylori*
HBV – hepatitis B virus
HCV – hepatitis C virus
HDV – hepatitis D virus
HCC – hepatocellular carcinoma
HCP – Hereditary Cancer Program
INR – international normalized ratio
IPNs – Indigenous patient navigators
MALT – mucosa-associated lymphoid tissue type
NAFLD – nonalcoholic fatty liver disease
MRI – magnetic resonance imaging
MRCP – magnetic resonance cholangiopancreatography
MASLD – metabolic dysfunction-associated steatotic liver disease
NPs – nurse practitioners
OCEBM – Oxford Centre for Evidence-Based Medicine
OR – odds ratio
PHSA – Provincial Health Services Authority
PPIs – proton pump inhibitors

PRISMA – Preferred Reporting Items for Systematic Reviews and Meta-Analyses
TIP – trauma-informed practice
TNM – tumour-node-metastasis
US – ultrasound
XR – x-ray
UBC-CPD – University of British Columbia, Continuing Professional Development

## ASSOCIATED DOCUMENTS

The following document accompanies this guideline:

- Upper Gastrointestinal Cancer – Parts 1 and 2, available at www.bccancer.bc.ca/health-professionals/networks/family-practice-oncology-network/guidelines-protocols

## REFERENCES


[1] OCEBM Levels of Evidence Working Group. (n.d.). *The Oxford Levels of Evidence 2*. Oxford Centre for Evidence-Based Medicine. https://www.cebm.ox.ac.uk/resources/levels-of-evidence/ocebm-levels-of-evidence

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[4] BC Cancer Registry (2022). Cancer Surveillance and Outcomes, Data and Analytics. *Age-standardized Cancer Incidence Rates (ASIR) per 100,000 and Average Annual Percent Change (AAPC) – Esophagus* [Data set]. BC Cancer (Canada). https://bccandataanalytics.shinyapps.io/BCSummary/

[5] Wild, C. P., Weiderpass, E., & Stewart, B. W. (Eds.). (2020). *World cancer report: Cancer research for cancer prevention*. International Agency for Research on Cancer. http://publications.iarc.fr/586

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