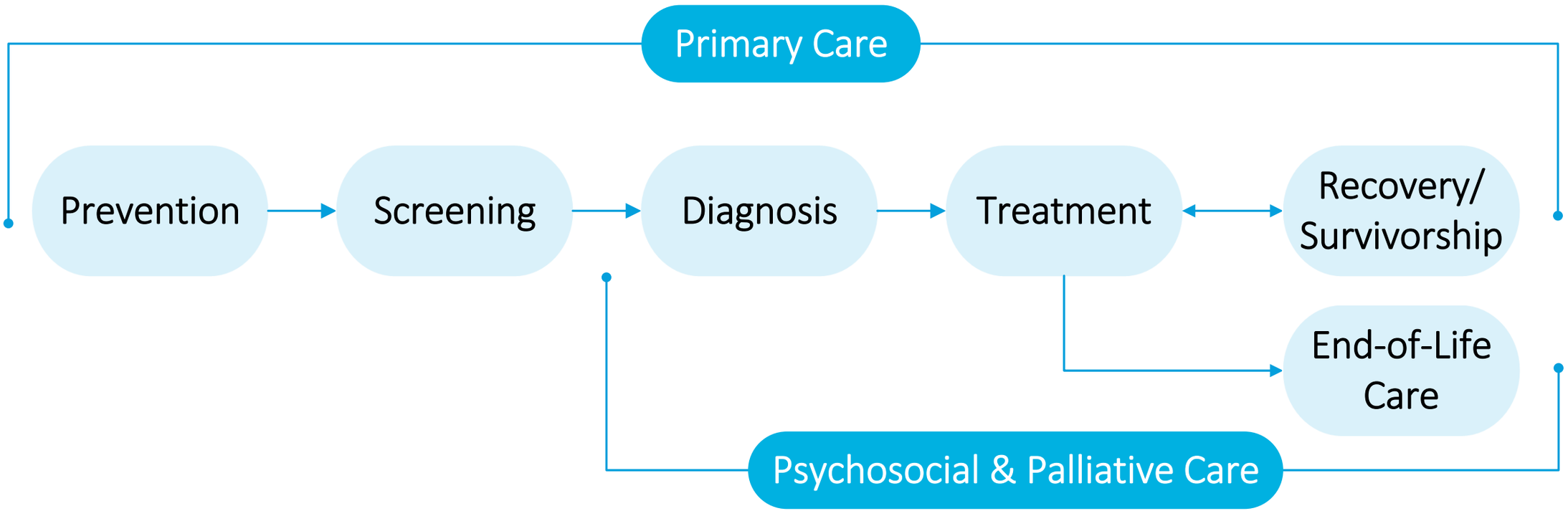
Hepatocellular Cancer Treatment Pathway Map Version 2024.07



Ontario Health
Cancer Care Ontario

Target Population

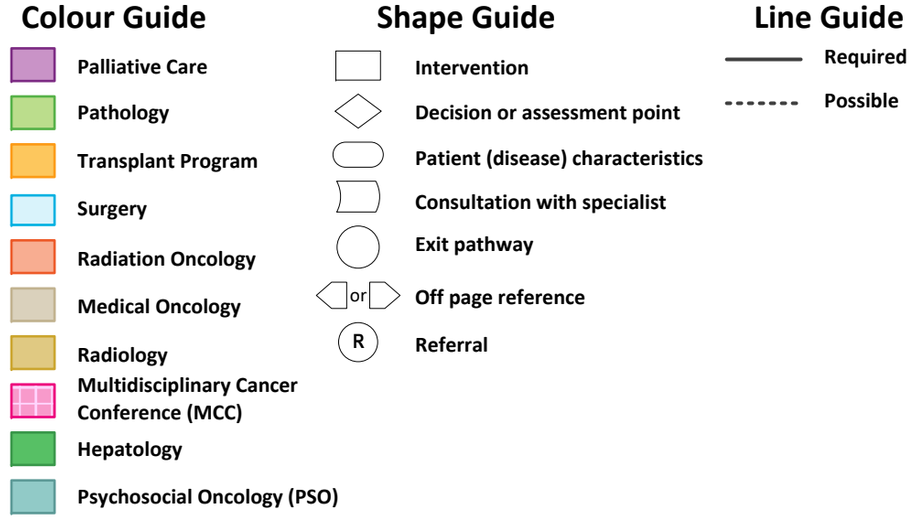
Patients at risk for developing Hepatocellular Cancer (HCC) with an abnormal liver imaging study (high risk screening or incidental finding)

Pathway Map Considerations

- Primary care providers play an important role in the cancer journey and should be informed of relevant tests and consultations. Ongoing care with a primary care provider is assumed to be part of the pathway map. For patients who do not have a primary care provider, Health811 is a government resource that helps patients find a doctor or nurse practitioner.
- Throughout the pathway map, a shared decision-making model should be implemented to enable and encourage patients to play an active role in the management of their care. For more information see Person-Centred Care Guideline and EBS #19-2 Provider-Patient Communication.*
- Hyperlinks are used throughout the pathway map to provide information about relevant CCO tools, resources and guidance documents.
- The term 'healthcare provider', used throughout the pathway map, includes primary care providers and specialists, e.g. family doctors, nurse practitioners, and emergency physicians.
- Multidisciplinary Cancer Conferences (MCCs) may be considered for all phases of the pathway map. For more information on Multidisciplinary Cancer Conferences, visit MCC Tools.
- For more information on wait time prioritization, visit Surgery.
- Clinical trials should be considered for all phases of the pathway map.
- Sexual health should be considered throughout the care continuum. Healthcare providers should discuss sexual health with patients before, during and after treatment as part of informed decision-making and symptom management. See Psychosocial Oncology Guidelines Resources.
- Before initiating gonadotoxic therapy (e.g. surgery, systemic, radiation), healthcare providers should discuss potential effects on fertility with patients and arrange referral to a fertility specialist if appropriate. See Ontario Fertility Program.
- Psychosocial oncology (PSO) is the interprofessional specialty concerned with understanding and treating the social, practical, psychological, emotional, spiritual and functional needs and quality-of-life impact that cancer has on patients and their families. Psychosocial care should be considered an integral and standardized part of cancer care for patients and their families at all stages of the illness trajectory. For more information, visit EBS #19-3.*
- The following should be considered when weighing the treatment options described in this pathway map for patients with potentially life-limiting illness:
  - Palliative care may be of benefit at any stage of the cancer journey, and may enhance other types of care – including restorative or rehabilitative care – or may become the total focus of care.
  - Ongoing discussions regarding goals of care is central to palliative care, and is an important part of the decision-making process. Goals of care discussions include the type, extent and goal of a treatment or care plan, where care will be provided, which health care providers will provide the care, and the patient's overall approach to care.

* **Note. EBS #19-2 and EBS #19-3** are older than 3 years and are currently listed as 'For Education and Information Purposes'. This means that the recommendations will no longer be maintained but may still be useful for academic or other information purposes.

Pathway Map Legend



Pathway Map Disclaimer

This pathway map is a resource that provides an overview of the treatment that an individual in the Ontario cancer system may receive.

The pathway map is intended to be used for informational purposes only. The pathway map is not intended to constitute or be a substitute for medical advice and should not be relied upon in any such regard. Further, all pathway maps are subject to clinical judgment and actual practice patterns may not follow the proposed steps set out in the pathway map. In the situation where the reader is not a healthcare provider, the reader should always consult a healthcare provider if he/she has any questions regarding the information set out in the pathway map. The information in the pathway map does not create a physician-patient relationship between Ontario Health (Cancer Care Ontario) and the reader.

While care has been taken in the preparation of the information contained in the pathway map, such information is provided on an "as-is" basis, without any representation, warranty, or condition, whether express, or implied, statutory or otherwise, as to the information's quality, accuracy, currency, completeness, or reliability.

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Child-Pugh Scoring System

The Child-Pugh scoring system is a clinical tool used to measure the severity of chronic liver disease. It classifies the severity of the disease into classes A, B, and C, based on specific clinical and laboratory parameters:

Parameter	1 point	2 points	3 points
Hepatic encephalopathy	None	Grade I-II	Grade III-IV
Ascites	Absent	Slight	Moderate
Total bilirubin	< 2 mg/dl	2-3 mg/dl	> 3 mg/dl
Serum albumin	> 3.5 g/dl	2.8-3.5 g/dl	< 2.8 g/dl
Prothrombin time prolongation*	< 4 seconds	4-6 seconds	> 6 seconds
International normalized ratio (INR)*	< 1.7	1.7-2.3	> 2.3

*When calculating the Child-Pugh score, either the prothrombin time prolongation **OR** INR is used.

The Child-Pugh classification is determined based on the sum of the points for each of the parameters above:

Child-Pugh Class	Points
Child-Pugh A	5-6
Child-Pugh B	7-9
Child-Pugh C	10-15

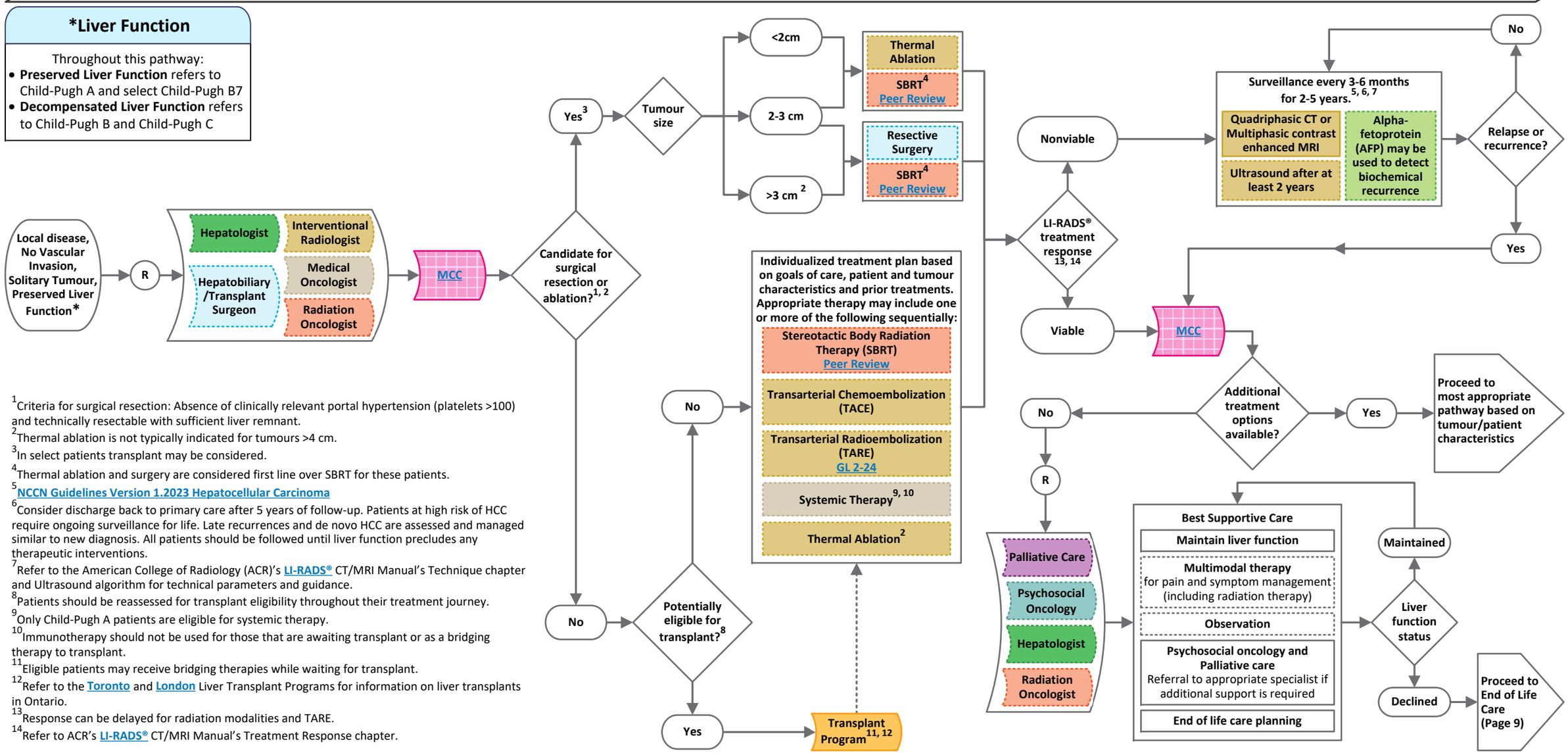
Adapted from Pugh RN, Murray-Lyon IM, Dawson JL, Pietroni MC, Williams R. Transection of the oesophagus for bleeding oesophageal varices. Br J Surg [Internet]. 1973 Aug [cited 2024 March 12];60(8):646-9.Available from: https://doi.org/10.1002/bjs.1800600817. DOI: 10.1002/bjs.1800600817.

Screen for psychosocial needs, and assessment and management of symptoms. Click here for more information about symptom assessment and management tools

Consider the introduction of palliative care, early and across the cancer journey. Click here for more information about palliative care

***Liver Function**

Throughout this pathway:
- **Preserved Liver Function** refers to Child-Pugh A and select Child-Pugh B7
- **Decompensated Liver Function** refers to Child-Pugh B and Child-Pugh C



[1] Criteria for surgical resection: Absence of clinically relevant portal hypertension (platelets >100) and technically resectable with sufficient liver remnant.

[2] Thermal ablation is not typically indicated for tumours >4 cm.

[3] In select patients transplant may be considered.

[4] Thermal ablation and surgery are considered first line over SBRT for these patients.

[5] NCCN Guidelines Version 1.2023 Hepatocellular Carcinoma

[6] Consider discharge back to primary care after 5 years of follow-up. Patients at high risk of HCC require ongoing surveillance for life. Late recurrences and de novo HCC are assessed and managed similar to new diagnosis. All patients should be followed until liver function precludes any therapeutic interventions.

[7] Refer to the American College of Radiology (ACR)'s LI-RADS® CT/MRI Manual's Technique chapter and Ultrasound algorithm for technical parameters and guidance.

[8] Patients should be reassessed for transplant eligibility throughout their treatment journey.

[9] Only Child-Pugh A patients are eligible for systemic therapy.

[10] Immunotherapy should not be used for those that are awaiting transplant or as a bridging therapy to transplant.

[11] Eligible patients may receive bridging therapies while waiting for transplant.

[12] Refer to the Toronto and London Liver Transplant Programs for information on liver transplants in Ontario.

[13] Response can be delayed for radiation modalities and TARE.

[14] Refer to ACR's LI-RADS® CT/MRI Manual's Treatment Response chapter.

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Local disease, No Vascular Invasion, Multi-focal Tumours, Preserved Liver Function*

R

Hepatologist
Interventional Radiologist
Hepatobiliary /Transplant Surgeon
Medical Oncologist
Radiation Oncologist

MCC

Potentially eligible for transplant?

Yes → Transplant Program[11, 12]

No

Treatment choice based on tumour size, volume and number[16]

2-3 tumours Size <3 cm → Eligible for ablation?

Yes → Thermal Ablation / SBRT[4] Peer Review

No

2-3 tumours (>3 cm) OR >3 tumours

Individualized treatment plan based on goals of care, patient and tumour characteristics and prior treatments. Appropriate therapy may include one or more of the following sequentially:
- Transarterial Chemoembolization (TACE)[15]
- Transarterial Radioembolization (TARE) GL 2-24
- Stereotactic Body Radiation Therapy (SBRT) Peer Review
- Systemic Therapy[9, 10]
- Thermal Ablation[2]

LI-RADS® treatment response[13, 14]

Nonviable → Surveillance every 3-6 months for 2-5 years.[5, 6, 7]
- Quadriphasic CT or Multiphasic contrast enhanced MRI
- Ultrasound after at least 2 years
- Alpha-fetoprotein (AFP) may be used to detect biochemical recurrence

Recurrence/ Progression → Proceed to most appropriate pathway based on tumour/ patient characteristics

Viable → MCC → Additional treatment options available?

Yes → Palliative Care / Psychosocial Oncology / Hepatologist / Radiation Oncologist

R

No

Best Supportive Care
- Maintain liver function
- Multimodal therapy for pain and symptom management (including radiation therapy)
- Observation
- Psychosocial oncology and Palliative care: Referral to appropriate specialist if additional support is required
- End of life care planning

Liver function status → Maintained

Declined → Proceed to End of Life Care (Page 9)

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[12] Refer to the Toronto and London Liver Transplant Programs for information on liver transplants in Ontario.

[13] Response can be delayed for radiation modalities and TARE.

[14] Refer to ACR's LI-RADS® CT/MRI Manual's Treatment Response chapter.

[15] After 2 sessions of TACE and in the setting of incomplete response, progression in index lesion, and/or toxicity a switch to another modality should be considered.

[16] Surgical resection can be considered in highly select patients.

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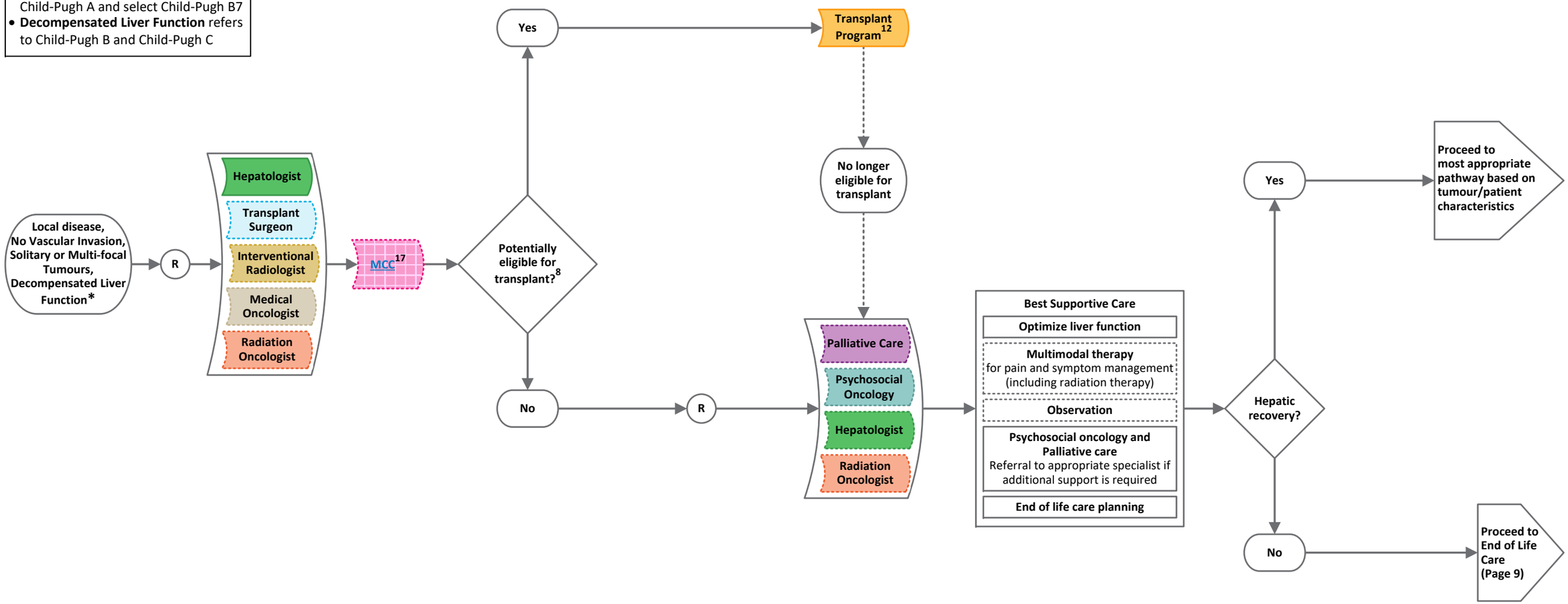

[8] Patients should be reassessed for transplant eligibility throughout their treatment journey.
[12] Refer to the Toronto and London Liver Transplant Programs for information on liver transplants in Ontario.
[17] In select patients loco-regional therapies may be appropriate.

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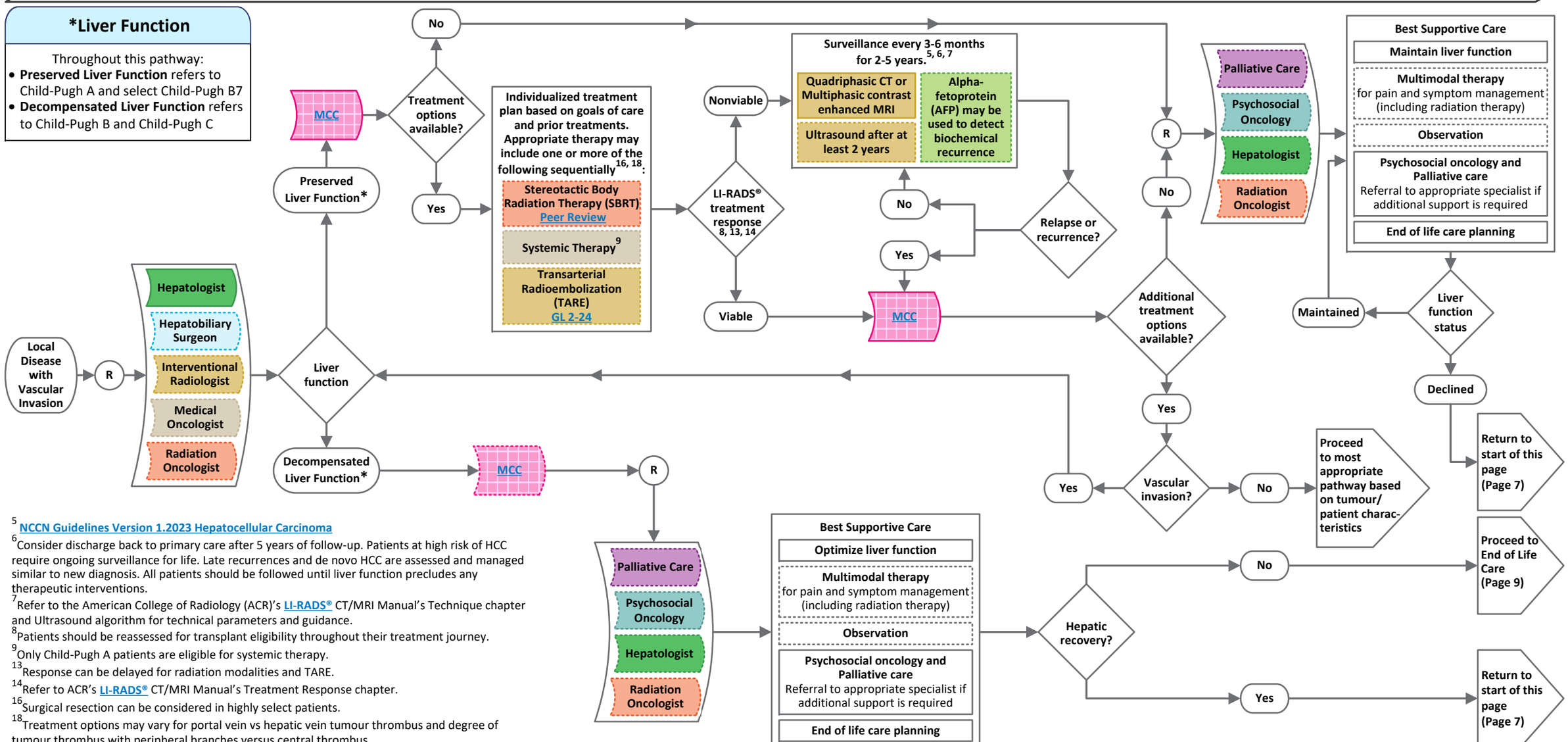

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[16] Surgical resection can be considered in highly select patients.

[18] Treatment options may vary for portal vein vs hepatic vein tumour thrombus and degree of tumour thrombus with peripheral branches versus central thrombus.

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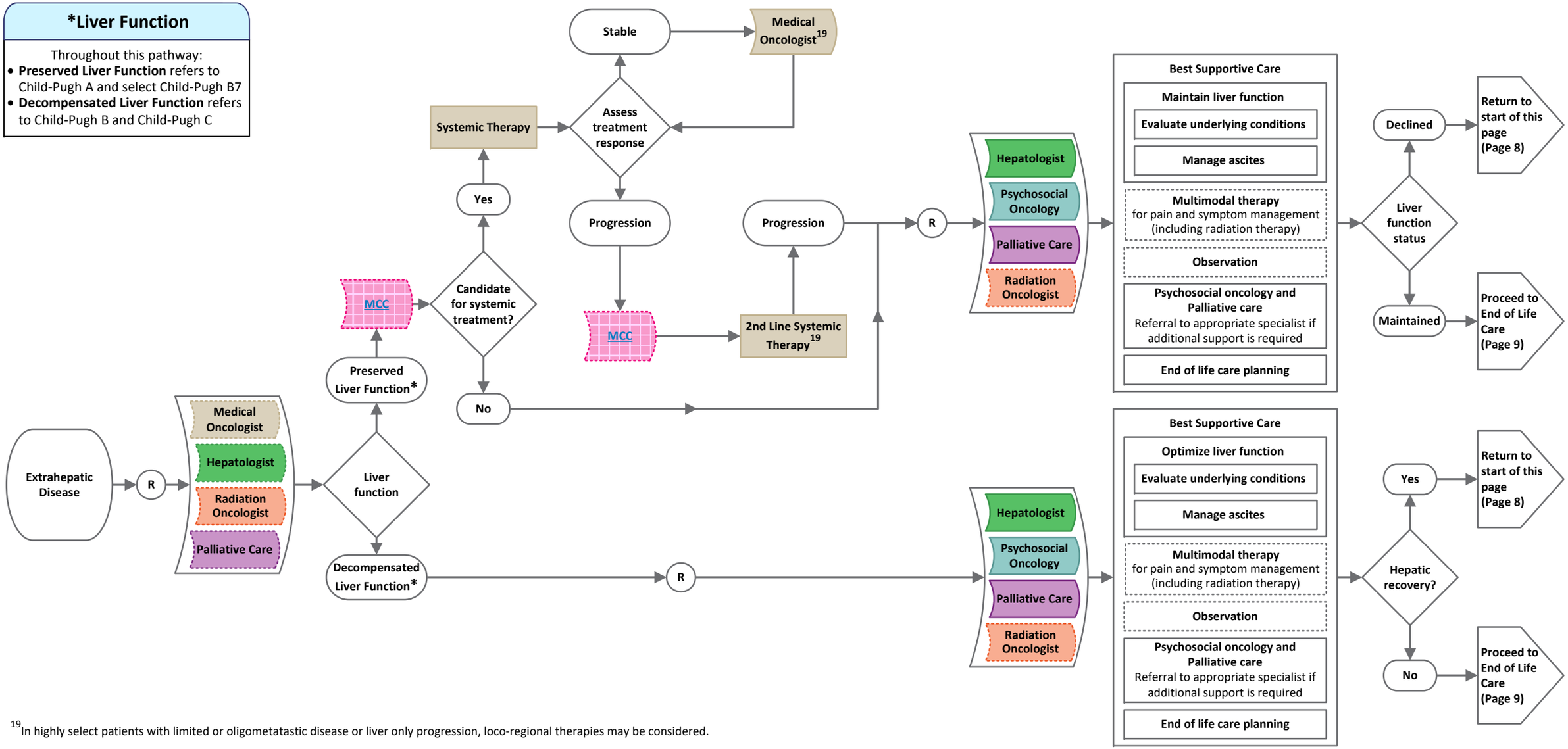

[19] In highly select patients with limited or oligometatastic disease or liver only progression, loco-regional therapies may be considered.

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Pathway Map Target Population:

Individuals with cancer approaching the last 3 months of life and their families.

While this section of the pathway is focused on the care delivered at the end of life, palliative care should be initiated much earlier in the illness trajectory. In particular, providers can introduce a palliative approach to care as early as the time of diagnosis.

Triggers that suggest patients are nearing the last few months and weeks of life

- Eastern Cooperative Oncology Group (ECOG) Performance Status/Patient-ECOG/Patient Reported Functional Status (PRFS) = 4

OR

- Palliative Performance Scale (PPS) ≤ 50
- Declining performance status/functional ability

Screen, Assess, Plan, Manage and Follow Up

+

End of Life Care planning and implementation Collaboration and consultation between specialist-level care teams and primary care teams

+

Conversations to determine where care should be provided and who will be responsible for providing the care

End of Life Care

☐ **Key conversations to revisit Goals of Care and to discuss and document key treatment decisions**

- Assess and address patient and family's information needs and understanding of the disease, address gaps between reality and expectation, foster realistic hope and provide opportunity to explore prognosis and life expectancy, and preparedness for death
- Explore the patient's views on medications, tests, resuscitation, intensive care and preferred location of death
- If a patient makes any treatment decisions relevant to their current condition (i.e., provides consent), these decisions can be incorporated into their Plan of Treatment
- Review Goals of Care and patient preferences regularly, particularly when there is a change in clinical status

☐ **Screen for specific end of life psychosocial issues**

- Assess and address patient and families' loss, grief and bereavement needs including anticipatory grief, past trauma or losses, preparing children (young children, adolescents, young adults), guardianship of children, death anxiety
- Provide appropriate guidance, support and information to families, caregivers, and others, based on awareness of culture and needs, and make referrals to available resources and/or specialized services to address identified needs as required
- Identify family members at risk for abnormal/complicated grieving and connect them proactively with bereavement resources

☐ **Identify patients who could benefit from specialized palliative care services (consultation or transfer)**

- As patient and family/caregiver needs increase and/or change over time consult with palliative care specialists and/or other providers with additional expertise, as required. Transfer care only if/when needs become more extensive or complex than the current team can handle
- Discuss referral with the patient and their family/caregiver

☐ **Proactively develop and implement a plan for expected death**

- Explore place-of-death preferences and the resources required (e.g., home, hospice, palliative care unit, long term care or nursing home) to assess whether this is realistic
- Prepare and support the family to understand what to expect, and plan for when a loved one is actively dying, including understanding probable symptoms, as well as the processes with death certification and how to engage funeral services
- Discuss emergency plans with patient and family (including who to contact, and when to use or avoid Emergency Medical Services)

☐ **Home care planning (if this is where care will be delivered)**

- Contact the patient's primary care and home and community care providers and relevant specialist physicians to ensure an effective transfer of information related to their care. If the patient is transitioning from the hospital, this should include collaborating to develop a transition plan
- Introduce patient and family to resources in community (e.g., respite, day hospice programs, volunteer services, support groups, etc.)
- Connect with home and community care services early (not just in the last 2-4 weeks)
- Ensure resources and services are in place to support the patient and their family/caregiver, and address identified needs
- Anticipate/plan for pain and symptom management, including consideration for a Symptom Response Kit to facilitate access to pain, dyspnea, and delirium medication for emergency purposes
- If the patient consents to withholding cardiopulmonary resuscitation, A 'Do Not Resuscitate' order must be documented in their medical record, and a Do Not Resuscitate Confirmation (DNR-C) Form should be completed. This form should be readily accessible in the home, to ensure that the patient's wishes for a natural death are respected by Emergency Medical Services

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Patient Death

At the time of death:

- ☐ Pronouncement of death
- ☐ Completion of death certificate
- ☐ Allow family members to spend time with loved one upon death, in such a way that respects individual rituals, cultural diversity and meaning of life and death
- ☐ Implement the pre-determined plan for expected death
- ☐ Arrange time with the family for a follow-up call or visit
- ☐ Provide age-specific bereavement services and resources
- ☐ Inform family of grief and bereavement resources/ services
- ☐ Initiate grief care for family members at risk for complicated grief
- ☐ Encourage the bereaved to make an appointment with an appropriate health care provider as required

Bereavement Support and Follow-Up

- ☐ Offer psychoeducation and/or counseling to the bereaved
- ☐ Screen for complicated and abnormal grief (family members, including children)
- ☐ Consider referral of bereaved family member(s) and children to appropriate local resources, spiritual advisor, grief counselor, hospice and other volunteer programs depending on severity of grief

Provide opportunities for debriefing of care team, including volunteers