Cancer Care Ontario

PATHWAY MAP DEVELOPMENT METHODOLOGY

Version 1.0
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Document created and maintained by the Disease Pathway Management Program

Ontario
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Table of Contents

1. Purpose 3

2. Disease Pathway Management Program 3

2.1. Background 3

2.2. Governance Structure and Leadership 3

3. Pathway Maps Overview 3

3.1. Definition and Purpose 3

3.2. Target Audiences and Vision 3

3.3. Key Stakeholder Engagement 4

4. Pathway Map Development Process 4

4.1. Overview 4

Figure 1. The Pathway Map Development Process 4

4.2. The Pathway Map Working Group 4

4.3. Pathway Map Development: Guiding Principles 4

4.3.1. Approach to Evidence 4

Figure 2. Approach to Evidence and Decision Making Tree for Pathway Map Content 5

4.3.2. Decision Making Process for non-Cancer Care Ontario guidance 5

4.3.3. Content Considerations 5

4.4. The Review & Publication Process 6

4.5. Annual Pathway Map Assessment, Review and Updating 6

4.5.1. Overview 6

4.5.2 Regular Annual Review 6

4.5.3 Assessing the Need for an Urgent Review 6

Contact Information 7

Appendix A: Pathway Map Visual Standards 9

Appendix B: Legal Disclaimers 17

1. Purpose

The purpose of this document is to describe the methodology that Cancer Care Ontario uses to develop pathway maps.

2. Disease Pathway Management Program

2.1. Background

The Disease Pathway Management (DPM) Program champions a disease site approach for how Cancer Care Ontario sets priorities, plans services and improves the quality of cancer care across Ontario. This approach looks across the entire cancer continuum for a given disease site - from prevention to recovery to end-of-life care – rather than at specific points of care.

DPM engages multidisciplinary teams to develop disease site-specific pathway maps that depict the care a typical cancer patient should receive as they progress through the Ontario cancer care system. These pathway maps are integral to the disease site approach.

2.2. Governance Structure and Leadership

The DPM Program is co-led by a manager and a clinical lead. In addition, the leadership team includes clinical leads for each disease site: breast, thoracic, genitourinary, gastrointestinal, hematologic, head and neck, gynecological, skin and central nervous system cancers. They are referred to as the Ontario Cancer Leads.

3. Pathway Maps Overview

3.1. Definition and Purpose

Pathway maps are flowcharts that provide a high-level overview of the care that a typical cancer patient in Ontario should receive. They are organized by cancer type (e.g., lung cancer) and phase of the cancer continuum (e.g. screening, diagnosis, treatment), and represent evidence-based best practice for patients in Ontario. Through the process of mapping evidence-based best practice, the disease site approach identifies areas for improvement that the province, Regional Cancer Programs, and individual institutions can act upon. Pathway maps serve as the portal to the evidence base, indicators and data used to define and measure compliance with best practice.

3.2. Target Audiences and Vision

In their current format, the target audiences for pathways are: 1) healthcare providers, and 2) healthcare system administrators – at Cancer Care Ontario, the Regional Cancer Centres, and other hospitals and provider organizations.

DPM envisions that future formats will be interactive, customizable, web-based, accessible in various formats (e.g. on a smartphone or computer), and/or embedded into systems that support real-time clinical decisions.

The expectation is that pathway maps will be used to drive concordance with evidence-based care, and facilitate system planning.

3.3. Key Stakeholder Engagement

Multidisciplinary teams (Working Groups) with disease-specific experts including primary care providers, specialists, nurses and allied health professionals are established for each pathway map. In addition to these experts who are engaged throughout the pathway map development process, DPM actively solicits input and feedback from various internal (e.g. Cancer Care Ontario's Programs) and external (e.g. healthcare providers) stakeholder groups.

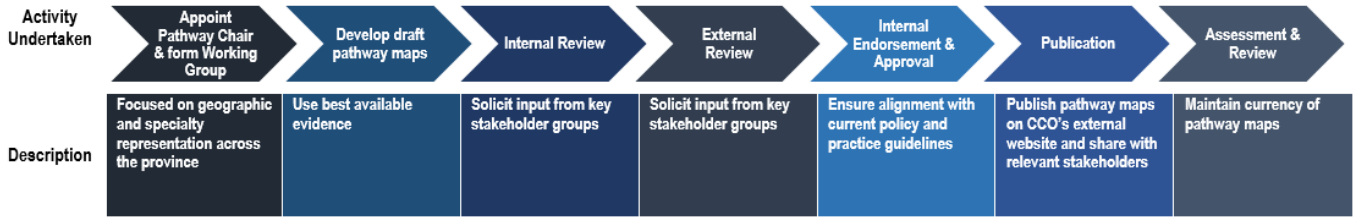
As active participants in the cancer system, patients and families can provide unique perspectives and valuable feedback on the standard of care they receive. Their insight helps to inform programs, policies, and practices aimed at improving the patient experience and advancing person-centered care. DPM will continue to refine an approach to engage patients and family members in pathway map development and the identification of gaps in the cancer system and opportunities for quality improvement.

4. Pathway Map Development Process

4.1. Overview

DPM uses an iterative pathway map development process (see Figure 1. The Pathway Map Development Process). Once published on the Cancer Care Ontario public website, the pathway maps are regularly updated to ensure their currency and accuracy.

Figure 1. The Pathway Map Development Process



4.2. The Pathway Map Working Group

A pathway map Working Group is established for each cancer to be mapped (e.g. Breast Cancer Pathway Map Working Group). Working Groups are comprised of multidisciplinary experts, representing relevant healthcare disciplines and regions from across Ontario. The Working Group members serve as content experts, and advise on the content, organization and flow of the pathway maps. The Ontario Cancer Lead for that disease site may assume the role of Pathway Map Chair or will guide the process of appointing a Pathway Map Chair to lead the pathway map development process.

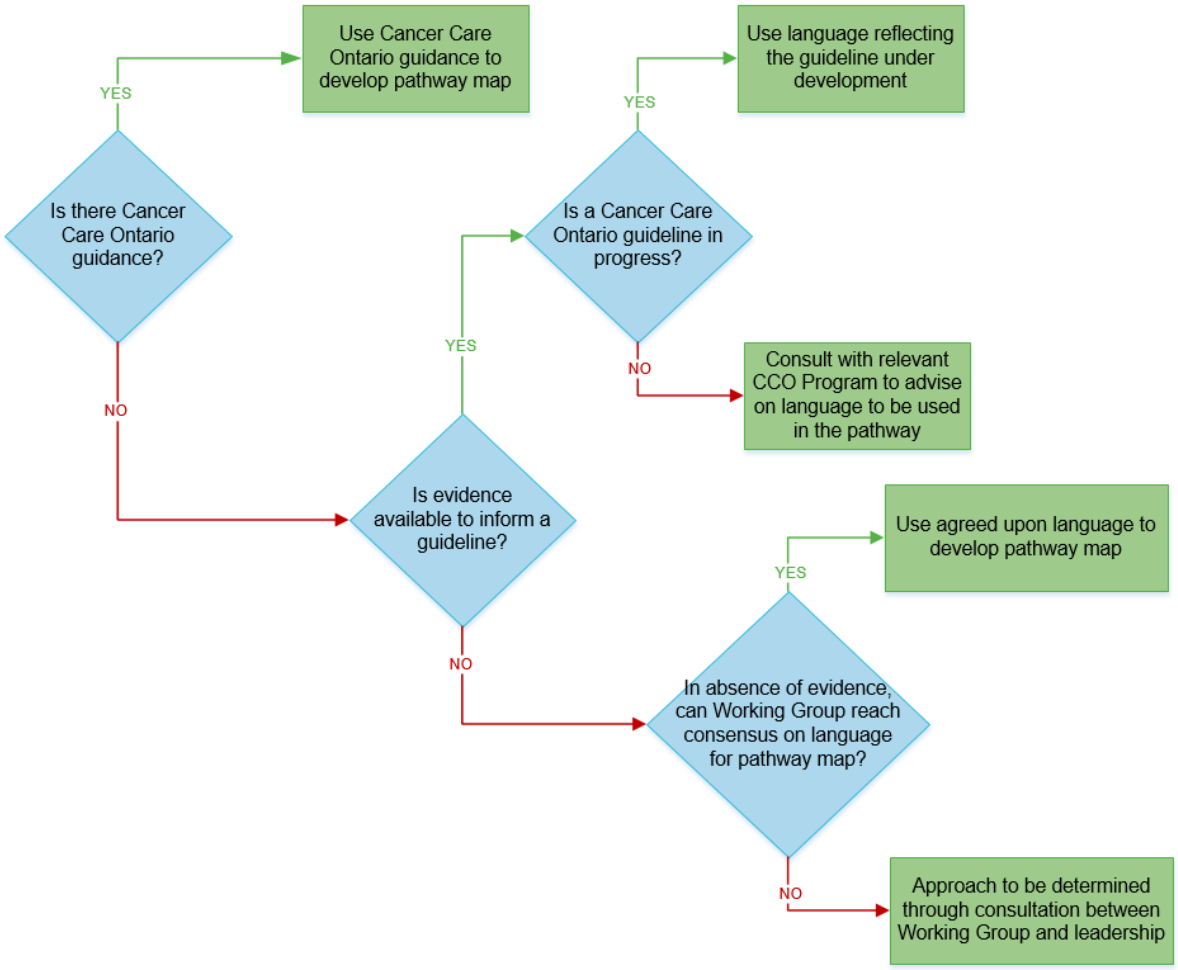
4.3. Pathway Map Development: Guiding Principles

Pathway maps are created and revised through an iterative series of consultations with the Pathway Map Working Group.

4.3.1. Approach to Evidence

A key guiding principle in DPM's approach to pathway map development is the use of best available evidence that is relevant and applicable within the Ontario cancer system. Figure 2 outlines DPM's approach to evidence as well as the decision making process used in situations where evidence is limited or controversial.

Figure 2. Approach to Evidence and Decision Making Tree for Pathway Map Content



DPM's pathway maps depict and link to publicly available Cancer Care Ontario advice documents (e.g. guidelines, recommendation reports, position statements), the majority of which are published by the Program in Evidence-Based Care; as well as policy documents from provincially-implemented Cancer Care Ontario programs (e.g. Ontario Breast Screening Program, ColonCancerCheck).

4.3.2. Decision Making Process for non-Cancer Care Ontario guidance

If Cancer Care Ontario guidance is not available, the Working Group members review national and international guidelines and in the absence thereof, peer-reviewed literature of best available evidence. Where evidence is lacking or conflicting, pathway map recommendations are based on expert consensus.

4.3.3. Content Considerations

The level of detail reflected in the pathway maps is at the discretion of the chair. At present, details on specific recommendations for chemotherapy and radiation treatment regimens are not included. Therefore, systemic treatment and radiation treatment are generally described as "chemotherapy" and "radiation therapy" respectively, without reference to tumor specific treatment protocols. Policies pertaining to drug funding and reimbursement are not included either. Furthermore, only diagnostic tests and procedures that are funded through the Ontario Health Insurance Plan are represented in the pathway maps.

4.4. The Review & Publication Process

Draft pathway maps undergo a review process in order to gain stakeholder feedback. This process consists of two steps: 1) internal review, and 2) external review, each with a specific focus.

Review Step	*Focus*
1) **Internal Review**: DPM program & relevant Cancer Care Ontario program areas	• Alignment with vision, goals and objectives of the Cancer Care Ontario • Alignment with work that has been done, is currently underway, or is being planned within Cancer Care Ontario
2) **External Review**: stakeholders from across Ontario	• Accuracy, completeness, and organization of the pathway map content

For the external review, pathway maps are shared broadly utilizing various communication vehicles (e.g. Regional Vice Presidents, communities of practice).

The final draft of the pathway maps will be endorsed by: 1) the Working Group and 2) Clinical Council, CCO's clinical leadership group for cancer care. At this endorsement stage the pathway map is also shared with the Provincial Leadership Council, which is composed of the Regional Cancer Program Vice Presidents.

Upon receiving endorsement, the pathway maps are published on Cancer Care Ontario's public website. The publication of the pathway maps is announced to relevant stakeholders via various communication channels including email and social media.

4.5. Annual Pathway Map Assessment, Review and Updating

4.5.1. Overview

A formal review of the pathway map is scheduled to occur annually. Over the course of the year, newly published or updated evidence documents (CCO-created and external documents) and pathway map feedback received since the last publication are monitored.

Information received throughout the year is prioritized into two categories:

1) evidence to be taken into consideration during the regular annual review
2) evidence requiring urgent review (see criteria in section 4.5.3)

4.5.2 Regular Annual Review

The annual review process commences by updating the pathway maps based on all newly identified advice documents (includes guidelines, evidence summaries, endorsements, position statement, etc.), and feedback or information received since publication. Experts are engaged as appropriate, depending on the scope of the update. The revised pathway map undergoes the endorsement/approval process as required and is published on the Cancer Care Ontario website in place of the former version.

4.5.3 Assessing the Need for an Urgent Review

New information warrants an urgent review if it meets one of two criteria:

1) There is a change to or misalignment with CCO or provincial policies or positions
2) The information would have a substantive effect on patient safety or outcomes

When there is a need for an urgent review, relevant clinical experts are engaged to review the new information and publish an updated pathway map in a timely fashion.

Contact Information

More information regarding DPM and pathway maps can be found at www.cancercare.on.ca/pathways.

Any questions and/or concerns can be directed to the DPM team at disease.pathway.management@cancercare.on.ca.

Appendices

Appendix A: Pathway Map Visual Standards

Appendix B: Legal Disclaimers

Appendix A: Pathway Map Visual Standards

Disease Pathway Management Pathway Map Visual Standards

Version 1.0
June 2017

SECTION ONE

Introduction

The purpose of this document is to describe the visual standards that the Disease Pathway Management (DPM) program uses to depict information in pathway maps. The visual standards can be adopted by other programs within Cancer Care Ontario and are designed to be used as a reference for all pathway work, maintaining the integrity and consistency of pathway maps developed by CCO.

SECTION TWO

The Pathway Map Components

A variety of colours, shapes and line styles are used to provide structure and function to the pathway maps.

I. Colour Guide

Colours are used to depict individual care teams, specialties or programs. The generic colours used to represent each specialty, care team or program are shown in Table 1. Additional colours can be used to represent specialties that are not represented within this generic colour bank (e.g. respirologist for a lung cancer pathway map).

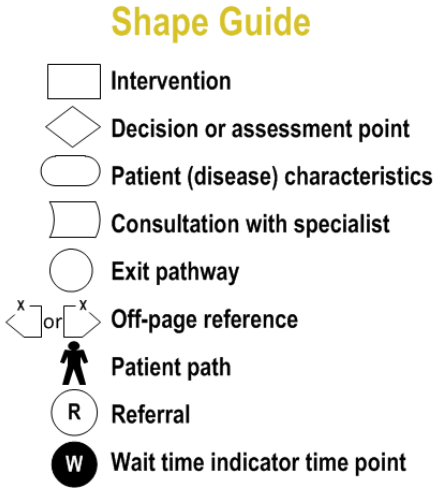
Table 1 Colour Guide

Specialty	Colour
Primary Care	
Supportive and End of Life Care	
Pathology	
Diagnostic Assessment Programs (DAP)	
Surgery	
Radiation Oncology	
Medical Oncology	
Radiology	
Multidisciplinary Cancer Conference (MCC)*	
Psychosocial Oncology	

II. Shape Guide

Each step in a pathway map serves a specific function or purpose. DPM uses shapes to differentiate between these functions (Figure 1).

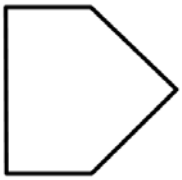
Figure 1



Off-Page References

Off-Page Reference shapes are used to logically depict the connection between different pages within a pathway map and/or across multiple pathway maps, allowing users to easily follow the path. There are two types of off-page reference shapes: 1) **Outgoing Pathway Connector,** and 2) **Incoming Pathway Connector.** To ensure that the cancer care continuum is easy to follow, the connectors are affiliated with a letter. Users can then connect the letters to match the outgoing pathway connector with the appropriate incoming pathway connector.

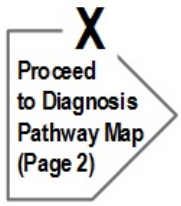
Outgoing Pathway Connector



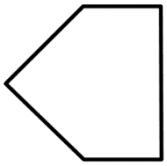
- In Figure 2 text has been added to this connector to identify that the journey/process/flow will continue onto Page 2
- Used at the end of a page to identify where the journey/process/flow is leading to

**Note: If a connector is used to connect pages within one pathway, it is worded as "Proceed to Page #" (e.g. Proceed to Page 2). If a connector is used to connect pages between pathway maps, it is worded as "Proceed to X Pathway (Page #) (e.g. Proceed to Diagnosis Pathway (Page 2)).*

Figure 2



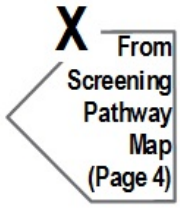
Incoming Pathway Connector



- Used at the beginning of a new page to indicate where the journey/process/flow originated from
- In Figure 3 text has been added to the connector to identify that the journey/process/flow is a continuation of Page 2

**Note: If a connector is used to connect pages within one pathway map, it is worded as "Proceed to Page #" (e.g. Proceed to Page 2). If a connector is used to connect pages between pathway maps, it is worded as "Proceed to X Pathway (Page #) (e.g. Proceed to Diagnosis Pathway (Page 2)).*

Figure 3

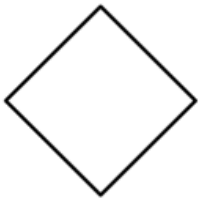


Points Of Pathway Divergence

Decision/Assessment Point shapes are used to identify points in the pathway map that diverge into 2 or more path options. A **Patient (Disease) Characteristic** shape identifies which particular path is most appropriate for certain patient subgroups when other possible path(s) exist. Typically, the path that depicts the most common regimen (e.g. treatment with curative intent) will be depicted at the top.

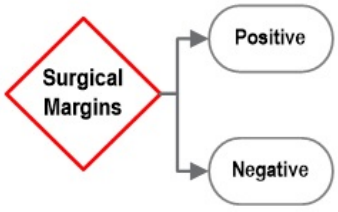
Decision or Assessment Point

(shape being discussed is highlighted in red)



- Used before a point of divergence to highlight what decision or assessment has to be made/completed
- In Figure 4 text has been added to the **Decision/Assessment Point** shape to show that surgical margins must be assessed in order to determine which path will be taken

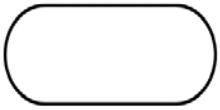
Figure 4



Points Of Pathway Divergence

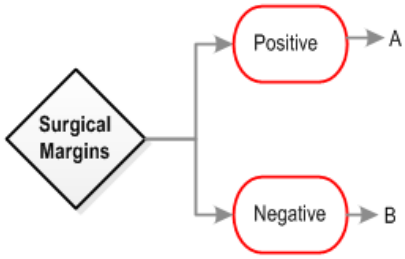
Patient (Disease) Characteristics

(shape being discussed is highlighted in red)



- Used (most commonly) following a **Decision/Assessment Point** shape to highlight why a pathway map diverges
- In Figure 5 **Patient (Disease) Characteristics** shapes have been added to show that positive surgical margins lead to path A and negative margins lead to path B

Figure 5



Patient Actions

Two important actions are part of the cancer continuum: consultation visits and intervention visits. A consultation, as defined by the Ministry of Health and Long-Term Care, 'is an assessment rendered following a written request from a referring physician…'[1]. **Consultation** shapes, differentiated by colours, are used to identify a pathway map step at which a consultation is occurring. Consultation shapes include text to provide information about which specialist is conducting the consultation. **Intervention** shapes, also differentiated by colours, are used to denote an intervention (e.g. treatment, pathological assessment). Intervention boxes include text to provide information about the type of intervention at that step.

Consultation

- Figure 6 shows an example of how a consultation with a radiation oncologist is depicted

*Examples: Text commonly used within **Consultation** shapes: medical oncologist, radiation oncologist, Multidisciplinary Cancer Conference (MCC), supportive and end of life care teams*

Figure 6

Intervention

- Figure 7 shows an example of how an intervention involving radiation treatment is depicted

*Examples: Text commonly used within **Intervention** shapes: chemotherapy, radiation treatment, surgery, pathology.*

Figure 7

Time Point Indicators

Three time points are demarcated on DPM pathway maps. **Referral** shapes are used to denote the specific point of time at which a referral is made. **Wait Time Indicator** shapes are used to demarcate the starting point of a wait time measure that is not already depicted within the pathway map by another shape. **Exit** shapes are used to denote a point in time at which a patient exits the cancer pathway map.

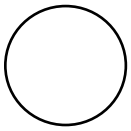
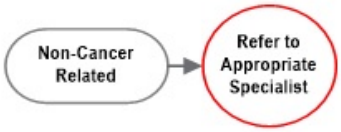
Referral

(shape being discussed is highlighted in red)

- Used to denote the point at which a referral to a specialist/care team is made
- In Figure 8 a **Referral** shape is used to show a referral to a radiation oncologist

Figure 8

[1] Ministry of Health and Long-Term Care. (2014). *Schedule of Benefits for Physician Services under the Health Insurance Act.* Report from: http://www.health.gov.on.ca/english/providers/program/ohip/sob/physserv/physserv_mn.html

Time Point Indicators		
Wait Time Indicator (shape being discussed is highlighted in red) 	• Used to denote the starting point of common wait time measures: ready-to-treat and decision-to-treat • In Figure 9 a **Wait Time Indicator** shape is used to mark the point at which a patient is 'ready' to treat (the time interval between the **Wait Time Indicator** shape to the patient's treatment, radiation treatment or surgery)	**Figure 9**
Exit Pathway 	• In Figure 10 a circle is shown after a non-cancer related diagnosis. Text is added to this shape to indicate where the patient should be exiting to. *Example: Text commonly used within circle: refer to appropriate specialist, return to primary care provider for appropriate follow-up, treatment (and/or follow-up) as appropriate*	**Figure 10** 

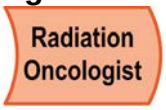
Other Pathway Shapes		
Pathway maps involve a series of steps which may or may not involve the patient directly. DPM uses a **Patient Path** shape to denote the pathway map nodes that directly involve the patient.		
Patient Path & Pathway Actions (shape being discussed is highlighted in red) 	• In Figure 11 a patient is directly involved in the consultation with a surgeon and this is shown by the black **Patient Path** shape • When a patient is not directly involved in a consultation or intervention (e.g. multidisciplinary cancer conferences, pathology) (Figure 12), the **Patient Path** shape is not used	**Figure 11** **Figure 12**

III. Line Guide

Two line styles are used within the pathway maps: solid and dashed lines. Generally, a dashed line is used to identify a 'possible' node or path and a solid line is used to represent a 'required/recommended' node or path. More details on the use of solid and dashed lines are outlined below.

Shape Borders

Pathway map shapes will be outlined by either a solid or dashed line to denote whether it is a required or possible step. For example, in Figure 13, the consultation with a radiation oncologist is required. In Figure 14, the consultation is an 'option' or 'possibility' but not always indicated.

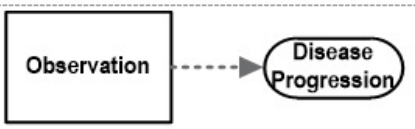
Figure 13	Figure 14
	

Arrows

Solid and dashed arrows are used to differentiate between required and possible pathway map routes. For example in Figure 15, the dashed arrow following the observation box indicates that only some but not all

patients proceed along the path. In fact, in this example, patients remain in the 'observation' node and only move onwards if their disease progresses (as indicated in the patient (disease) characteristic).

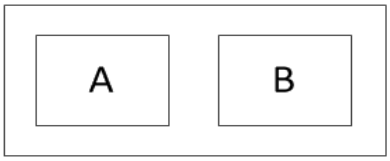
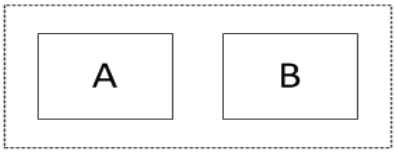
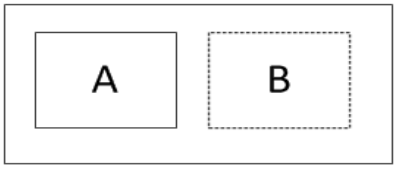
Figure 15



Additional Considerations for Pathway Map Development

I. Multiple pathway map actions at one time

In addition to illustrating individual steps involved in a journey/process, pathway maps can also illustrate actions that must/may occur together. A variety of shape and line combinations can be used to serve these types of scenarios. The information below outlines the most common combinations used and the steps involved in depicting these instances throughout a journey/process.

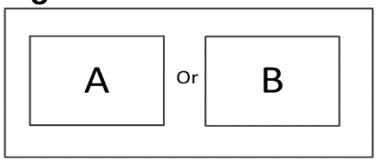
<table>
<tr><td colspan="2">A and B together is a 'required' step
In certain instances two (or more) interventions <u>must occur concurrently.</u></td></tr>
<tr><td>Steps:
1. Two (or more) shapes with solid borders
2. Enclose shapes within a larger solid box</td><td>Figure 16
  </td></tr>
<tr><td colspan="2">A and B together is a 'possible' step
In certain instances two (or more) interventions <u>must occur concurrently</u> but the step in its entirety may not be required.</td></tr>
<tr><td>Steps:
1. Two (or more) shapes with solid borders
2. Enclose shapes within a larger dashed box</td><td>Figure 17
  </td></tr>
<tr><td colspan="2">Do A, whereas B is 'possible'
In certain instances one (or more) interventions <u>may occur concurrently</u>.</td></tr>
<tr><td>Steps:
1. One (or more) shapes with solid border
2. One (or more) shapes with a dashed border
3. Enclose shapes within a larger solid box</td><td>Note. The recommended intervention is typically placed first and the optional intervention second.
Figure 18
  </td></tr>
</table>

A and B together is a 'required' step
In certain instances two (or more) interventions **must occur concurrently.**

Do A or B
At one point in a pathway map, two (or more) interventions may be applicable but only one or the other is required.

Steps:
1. Two (or more) shapes with solid borders
2. Separate shapes by the word 'Or'
3. Enclose shapes within a larger solid box

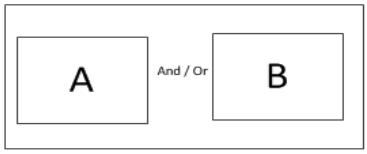
Figure 19



Choice of A and/or B
In certain instances, one (or more) intervention(s) can be done or one or the other can be done separately.

Steps:
1. Two (or more) shapes with solid borders
2. Separate shapes by the words 'And/Or'
3. Enclose shapes within a larger solid box

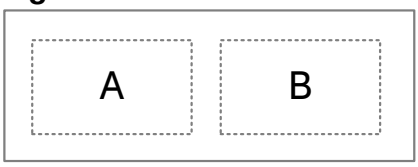
Figure 20



A and B combinations, where multiple options are 'possible'
In certain instances, one (or more) intervention(s) can be done together, done separately or none of the interventions may be done at all (the step in its entirety is not required).

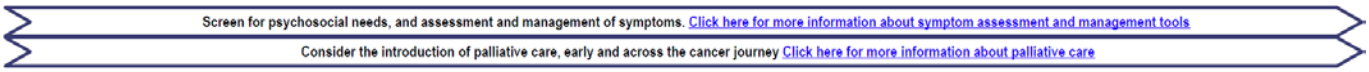
1. Two (or more) shapes with dashed borders
2. Enclose the shapes with a solid box

Figure 21



II. Banners

Pathway information can also be displayed as a banner. Banners denote supportive care* interventions that span the whole pathway map. The interventions stated within the banner are on-going or can be done at multiple points along the patient's path. Currently the following two banners are included on pathway maps: Psychosocial Oncology and Palliative Care.



* Supportive care includes the services needed by people living with or affected by cancer. This sort of care is intended to meet patients' physical, informational, emotional, psychological, social, spiritual, and practical needs during the pre-diagnostic, diagnostic, treatment and follow-up phases.

III. Supplementary Information

In addition to the information within the pathway shapes, the pathway maps currently feature five different categories of information: clinical, quality assurance, service delivery, supportive care, and ancillary/other. This information provides further guidance about the care depicted within the pathway map.

These information types are either depicted as pathway map considerations or footnotes:

Location	Information Types
Pathway Map Considerations	• Quality Assurance (general care considerations) • Service Delivery (general care considerations) • Supportive Care* (general care considerations) • Ancillary/Other
Footnotes	• Quality Assurance (specific to a pathway shape) • Service Delivery (specific to a pathway shape) • Supportive Care* (specific to a pathway shape) • Clinical

* Supportive care includes the services needed by people living with or affected by cancer. This sort of care is intended to meet patients' physical, informational, emotional, psychological, social, spiritual, and practical needs during the pre-diagnostic, diagnostic, treatment and follow-up phases.

Quality assurance, service delivery and supportive care elements can be included in either location, depending on the scope of the information. If it pertains to care in general, it should be listed as a pathway map consideration. If the information is unique to a pathway shape, it should be listed as a footnote. Clinical information is usually specific to individual points on the pathway and therefore should only be included as a footnote. Ancillary/Other information should be provided in pathway map considerations.

Appendix B: Legal Disclaimers

The following language is found on every page of the pathway map (excluding page 2):

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 Cancer Care Ontario (CCO) and the reader.

A full disclaimer can be found on the Pathway Map Preamble' (pathway map page 2) of each pathway map; the following is an example of the disclaimer language on a treatment pathway map:

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 Cancer Care Ontario (CCO) 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.

CCO and the pathway map's content providers (including the physicians who contributed to the information in the pathway map) shall have no liability, whether direct, indirect, consequential, contingent, special, or incidental, related to or arising from the information in the pathway map or its use thereof, whether based on breach of contract or tort (including negligence), and even if advised of the possibility thereof. Anyone using the information in the pathway map does so at his or her own risk, and by using such information, agrees to indemnify CCO and its content providers from any and all liability, loss, damages, costs and expenses (including legal fees and expenses) arising from such person's use of the information in the pathway map.

This pathway map may not reflect all the available scientific research and is not intended as an exhaustive resource. CCO and its content providers assume no responsibility for omissions or incomplete information in this pathway map. It is possible that other relevant scientific findings may have been reported since completion of this pathway map. This pathway map may be superseded by an updated pathway map on the same topic.