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Guideline Methodology Handbook

Cancer Care Alberta

Background and Organization

This handbook was developed by the Guideline Resource Unit (GURU) to outline the methods involved in the development and maintenance of clinical practice guidelines (CPGs) for Cancer Care Alberta.

The main objectives of GURU are: 1) to support the development, implementation and evaluation of evidence-informed CPGs, clinical pathways, follow-up letters, and other supporting materials for site-specific cancers, and 2) to coordinate annual multidisciplinary meetings for each Provincial Tumour Team to review and approve new and updated CPGs, share best practices, establish research priorities, collaborate on research initiatives, and discuss urgent operational issues. A detailed manual describing the timelines and administrative tasks required for planning of the annual Provincial Tumour Team Meetings is available from guru@ahs.ca upon request.

Table 1 outlines the roles and responsibilities of the GURU team members. GURU supports thirteen Provincial Tumour Teams, which are made up of oncologists, surgeons, pathologists, other specialists, nurses, pharmacists, allied health professionals, researchers, and patient representatives from across Alberta. Each Tumour Team has a medical lead/co-leads, who are responsible for prioritizing and setting the direction for their team, and who represent their team on the Provincial Tumour Team Council.

Table 1. GURU Team Member Roles and Responsibilities

Administrative Assistant	- Provides administrative support to GURU team members and Medical Director of Provincial Tumour Programs - Works with Program Coordinator to plan and execute annual meetings for each Tumour Team
Knowledge Management Specialist (KMS)	- Methodologist; works with Tumour Teams to synthesize evidence, create and update recommendations, oversee the development and approval of the guideline documents, and develop quality improvement and guideline evaluation strategies - Non-voting member of CPG Working Group - Each KMS is assigned to 4 Provincial Tumour Teams and may also be assigned to the development of CPGs that span across Tumour Teams
Manager	- Oversees the operations of GURU, including human resources activities, financial reporting, and strategic planning - Coordinates activities between GURU and Provincial Tumour Team leads, including setting priorities and supporting knowledge translation strategies to improve guideline uptake and adherence - Represents GURU on Provincial Tumour Team Council
Program Coordinator	- Provides operational and program support to GURU manager and team members - Works with Administrative Assistant to plan and execute annual meetings for each Provincial Tumour Team
Tumour Group Facilitator (TGF)	- Develops tools such as clinical pathways, follow-up letters for family physicians and patients, and guideline summaries to support and enhance CPGs - Assists in the development of strategies, tools and processes for guideline evaluation in collaboration with KMSs and Tumour Team members

Guideline Planning

Identification of a New Guideline Topic: The Tumour Team Lead will solicit input from Tumour Team members regarding priorities for new guideline topics; this process most often takes place during the annual meeting. Priorities may be based on the burden of disease, new treatment options, variation in practice, and new evidence. The Lead and their Executive members will make the final decision about which topics will be developed into guidelines.

Selection of the Guideline Lead and Working Group: After a guideline topic is identified, a Guideline Lead is appointed by the Tumour Team Lead and Executive. The Guideline Lead is a subject matter expert and their role is to facilitate discussions needed to develop and approve the guideline. The Working Group is a multidisciplinary team composed of subject matter experts and a methodologist from GURU; they are expected to take part in teleconferences and meetings to review evidence and drafts, and to provide timely feedback throughout the guideline development process. In some cases, formation of the Working Group is informal, where GURU and the Tumour Team Lead identify interested participants from the membership, or members volunteer at annual meetings. In other cases, it may be necessary to formalize the selection of the Working Group to ensure all relevant experts are given an equal opportunity to contribute to the development of the guideline. Situations which may require a formalized approach include:

- Controversial guideline topic
- Known practice variations across the province
- Guideline spans across multiple Tumour Teams or disease sites
- Limited or inconclusive evidence
- Expertise of external stakeholders or significantly impacted groups is required

In such cases, an “expression of interest” communication outlining the guideline topic, required expertise, timelines, and expectations is sent to the Tumour Team membership and relevant stakeholder groups. The Tumour Team Lead and Executive will then review the applications to ensure the Working Group is composed of the appropriate level of skill and experience.

Patient Perspectives: Where appropriate and feasible, patient representatives may be invited to participate in the Working Group. Activities may include: contributing to the formation of the CPG questions, review of the draft CPG, and contribution to the development and review of supporting documents (i.e., letters, pathways, summaries). The systematic literature review may also include studies that focus on patient and public perspectives where available, and these studies will be summarized in the evidence tables presented to the Working Group.

Timelines and Expectations: Table 2 summarizes the guideline development steps, responsibilities, and timelines.

Table 2. Guideline Development Steps, Responsibilities, and Timelines

Guideline Development Step	Responsibility	Timeline*
1. Identify guideline topic and Working Group lead	Tumour Team Lead	9-12 months prior
2. Recruit Working Group members	Tumour Team Lead & Guideline Lead	9 months prior
3. Consultation meeting to define guideline questions, scope, and search parameters	Guideline Lead & KMS	9 months prior
4. Conduct systematic review of published guidelines and primary evidence → synthesize studies meeting selection criteria in evidence tables → rate quality of selected evidence	KMS	6 months prior
5. Determine most appropriate guideline development methodology (adapt, adopt, or *de novo* synthesis)	Working Group & KMS	5 months prior
6. Review evidence tables → draft recommendations → assign ratings for the strength of each recommendation	Working Group & KMS	4 months prior
7. Draft guideline document	Working Group & KMS	3 months prior
8. Review and revise draft guideline document according to Working Group feedback	Working Group & KMS	2 months prior
9. Review draft guideline document and provide any final edits	Guideline Lead	1 month prior
10. Circulate draft guideline document to members of the Provincial Tumour Team and/or stakeholders	KMS	1-2 weeks prior
11. Where possible, present draft guideline document at the annual meeting for discussion	Guideline Lead & KMS	Prov. meeting
12. Review, revise, and provide final edits to the draft guideline document	Working Group & KMS	1-4 weeks after
13. Circulate draft guideline to members of the Tumour Team and stakeholders for final review and feedback via survey or email	GURU	5 weeks after
14. Submit final guideline to Tumour Team Lead and Executive for approval to publish to website	Guideline Lead & KMS	7 weeks after
15. Approve guideline	Tumour Team Lead	7-9 weeks after
16. Publish guideline to website and notify members of the Provincial Tumour Team and stakeholders	GURU	9 weeks after

** Relative to the date of the Provincial Tumour Team meeting*

Guideline Development and Deliverables

Research Questions*:* Specific research questions to be addressed by the guideline document are formulated by the Working Group and KMS using the PICO question format.[1]

Systematic Literature Review: The KMS conducts a systematic search of published guidelines and primary literature using the search parameters identified by the Guideline Lead and Working Group members. Tables 3 and 4 outline the resources used for the literature searches. Individual searches depend on the topic, specific research questions, scope and available resources. The detailed strategy and results are reported in the CPG document, including: search terms, Boolean

and proximity operators, the number of studies identified and included, inclusion/exclusion criteria, and the time period covered by the search.

Table 3. Resources for Search of Published Guidelines

Guideline Internet Sites
American Society of Clinical Oncology (ASCO)
BC Cancer
Canadian Agency for Drugs and Technology in Health (CADTH)
Cancer Care Ontario (CCO)
European Society of Medical Oncology (ESMO)
National Comprehensive Cancer Network (NCCN)
National Institute for Health and Care Excellence (NICE)
Guideline Clearinghouses
Cancer Guidelines Database
CPG Infobase: Clinical Practice Guidelines
ECRI Guidelines Trust
Guideline International Network (G-I-N)

Table 4. Resources for Search of Primary Literature

Databases
CINAHL - Nursing and allied health literature
Cochrane Library of Systematic Reviews
DynaMed Plus
Embase - Includes more European articles than Medline or PubMed
Medline
PubMed - 6 weeks ahead of Medline; includes citations to articles not yet assigned MESH headings
TripPro - Clinical search engine
UptoDate - Requires subscription
Other Resources
Conference Abstracts • ASH Annual Meeting Abstracts • San Antonio Breast Cancer Symposium Abstracts
Drug Information • Outpatient Cancer Drug Benefit Program Master List • AHS Provincial Drug Formulary (available on internal intranet only) • Alberta Blue Cross Drug Benefit List • Lexicomp® (requires subscription)
Society Websites • Canadian Cancer Society • Canadian Partnership Against Cancer • American Cancer Society
Grey Literature • Google and Google Scholar • Grey Matters

Critical Appraisal of Evidence: The KMS synthesizes the relevant details of the studies included from the literature search into evidence tables. The evidence tables may either be included in the CPG document as an appendix, posted separately on the www.ahs.ca/guru website, or made available upon request. The quality of the evidence is rated by the KMS and reviewed with the Working Group members according to the criteria in Table 5.

Table 5. Levels of Evidence

Level	Description of Evidence
I	• evidence from at least one large randomized controlled trial (RCT) of good methodological quality with low potential for bias • meta-analyses of RCTs without heterogeneity
II	• small RCTs • phase II RCTs • large RCTs with potential bias or meta-analyses including such trials RCTs with heterogeneity
III	• prospective cohort studies • post-hoc and ad-hoc analyses of RCTs
IV	• retrospective cohort studies • case-control studies • instrument validation studies (*note:* could be level III, based on size of population, methods)
V	• studies without a control group • case reports • expert opinions • review articles or narrative reviews • Delphi studies • cross-sectional studies (interviews, focus groups, surveys)

Formulating and Rating the Recommendations: The Working Group members formulate the guideline recommendations based on existing published guidelines and the evidence synthesized by the KMS blended with expert clinical experience and local context. They may decide to ***adopt*** the recommendations of another institution without any revisions, ***adapt*** the recommendations of another institution with revisions, or ***develop their own*** recommendations; this decision may be based on the guideline questions, as well as the volume, quality, relevance, and novelty of existing guidelines. Beginning in late 2019, ratings of the strength of the recommendations will be included in all newly developed or updated CPGs, to better align with the standards outlined by the Institute of Medicine.[2] These ratings take into consideration the description of known benefits and possible harms, the available evidence and confidence in the quality and consistency of this evidence, and a discussion of the role of clinical experience, values and opinions of the Working Group members. The strength of the recommendations is rated by the Working Group members according to the criteria in Table 6.

Table 6. Strength of Recommendations

Grade	Description of Recommendation Strength
A	Strongly recommended; strong evidence for efficacy with a substantial clinical benefit.
B	Generally recommended; strong or moderate evidence for efficacy but with a limited clinical benefit.
C	Optional; insufficient evidence for efficacy or benefit does not outweigh the risks/disadvantages.
D	Generally not recommended; moderate evidence against efficacy or for adverse outcomes.
E	Never recommended; strong evidence against efficacy or for adverse outcomes.

The criteria in Tables 5 and 6 were adapted from the Infectious Diseases Society of America[3] and the European Society for Medical Oncology (ESMO).

Development of Supporting Materials: Supporting materials such as clinical pathways, treatment algorithms, clinical summaries, and patient letters are often developed either simultaneously with a new CPG or *post hoc* for an existing CPG. These documents may help to increase awareness, promote practice changes, disseminate relevant information to broader audiences, or facilitate systematic collection of clinical data. The GURU Tumour Group Facilitators work closely with the Tumour Team Lead, Working Group members, and KMS to develop and implement these materials.

Guideline Review and Consensus

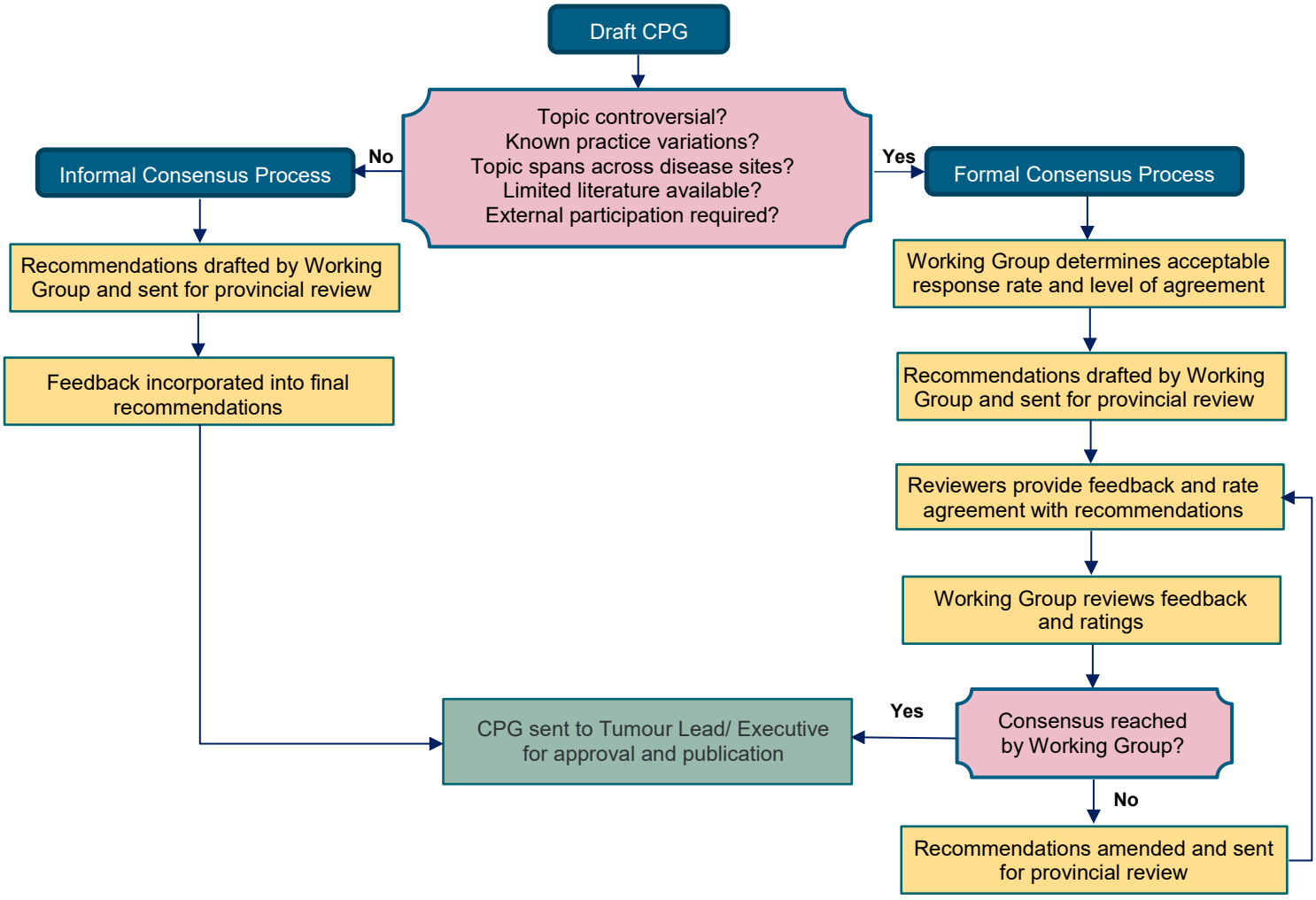
Once the CPG draft is complete, it is necessary to ensure that Tumour Team members and other stakeholders have an opportunity to review it for clarity and consensus.

If there is general agreement regarding best practices on the topic, an informal process is used where consensus is achieved primarily through discussions at annual meetings, by email, and/or videoconference discussions. A formal process may be required if: the CPG topic is controversial, there are known practice variations across the province, the CPG spans across multiple disease sites, there is limited or inconclusive evidence, or the expertise of external stakeholders or significantly impacted groups is required.

A common method used to obtain formal consensus on complex issues is the Delphi process.[4] GURU utilizes a modified Delphi process similar to that used by the American Society of Clinical Oncology (ASCO) and Cancer Care Ontario (CCO). This process involves successive iterations of the draft CPG being disseminated to the Provincial Tumour Team members and relevant stakeholders via an online survey until consensus is reached. Prior to drafting the recommendations, the Working Group determines an appropriate response rate. Based on the feedback received and the level of agreement, the draft CPG is updated and presented to the Provincial Tumour Team. Once consensus is reached, the CPG is approved by the Tumour Team Lead and Executive and published to the website. Figure 1 describes the formal and informal consensus processes.

Provincial Review: The provincial review of a CPG, either through the formal or informal consensus process, provides all members of the Tumour Team and other stakeholders with the opportunity to provide feedback. Other stakeholders may include operational leads, family physicians, or patient representatives. The timeline for a provincial review is typically 2-3 weeks.

Figure 1. Consensus Processes for Guideline Review and Approval



Guideline Publication

All CPGs and supporting documents created by GURU and the Provincial Tumour Teams are shared on the www.ahs.ca/guru website and are available to health care providers and the public through a Creative Commons license to encourage open dialogue, shared learning, collaborative innovation and improved healthcare services. Users are free to copy and distribute the work for non-commercial purposes, as long as they attribute the work to Alberta Health Services, do not adapt the work, and abide by the other license terms.

Below is an example for how to cite the CPGs. The sections in bold italic require modification to include specific details of the CPG:

(**Authors listed in alphabetical order by last name, first initial**). Cancer Care Alberta, Alberta Health Services (***Effective year***). Clinical Practice Guideline on ***Topic Name***, Version ***number***. Accessed ***Month, Year***. Available from: www.ahs.ca/guru

Posting on the www.ahs.ca/guru website is limited to documents that are owned or created by GURU and the Provincial Tumour Teams. Collaboration and endorsement of materials from other programs and partners is permitted through hyperlinks that have been reviewed by GURU and the appropriate Tumour Team.

Table 7 outlines common dissemination and implementation strategies used by GURU and the Provincial Tumour Teams to facilitate the integration of evidence-based recommendations into daily clinical practice.

Table 7. Guideline Dissemination and Implementation Activities

Activity	Target Audience	Examples
Communication	• Healthcare Professionals • Researchers	• Website publication on www.ahs.ca/guru • Inclusion in ECRI Guidelines Trust™ • Journal publications • Social media • Internal/external newsletter communications • Annual provincial meetings
Continuing Medical Education	Healthcare Professionals	• Annual provincial meetings • Guideline review
Quality Improvement Projects	• Healthcare Professionals • Researchers	• Chart audits • Publication of results of QI projects
Use of Opinion Leaders	• Healthcare Professionals • Researchers	• Tumour Team Lead • Guest speakers at annual provincial meetings
Additional Resource Development	• Healthcare Professionals • Patients	• Patient/physician transition letters • Algorithms and clinical pathways • Clinical summaries/one-pagers
Database Integration	• Healthcare Professionals • Researchers	• Integration of CPGs in synoptic templates and clinical information systems

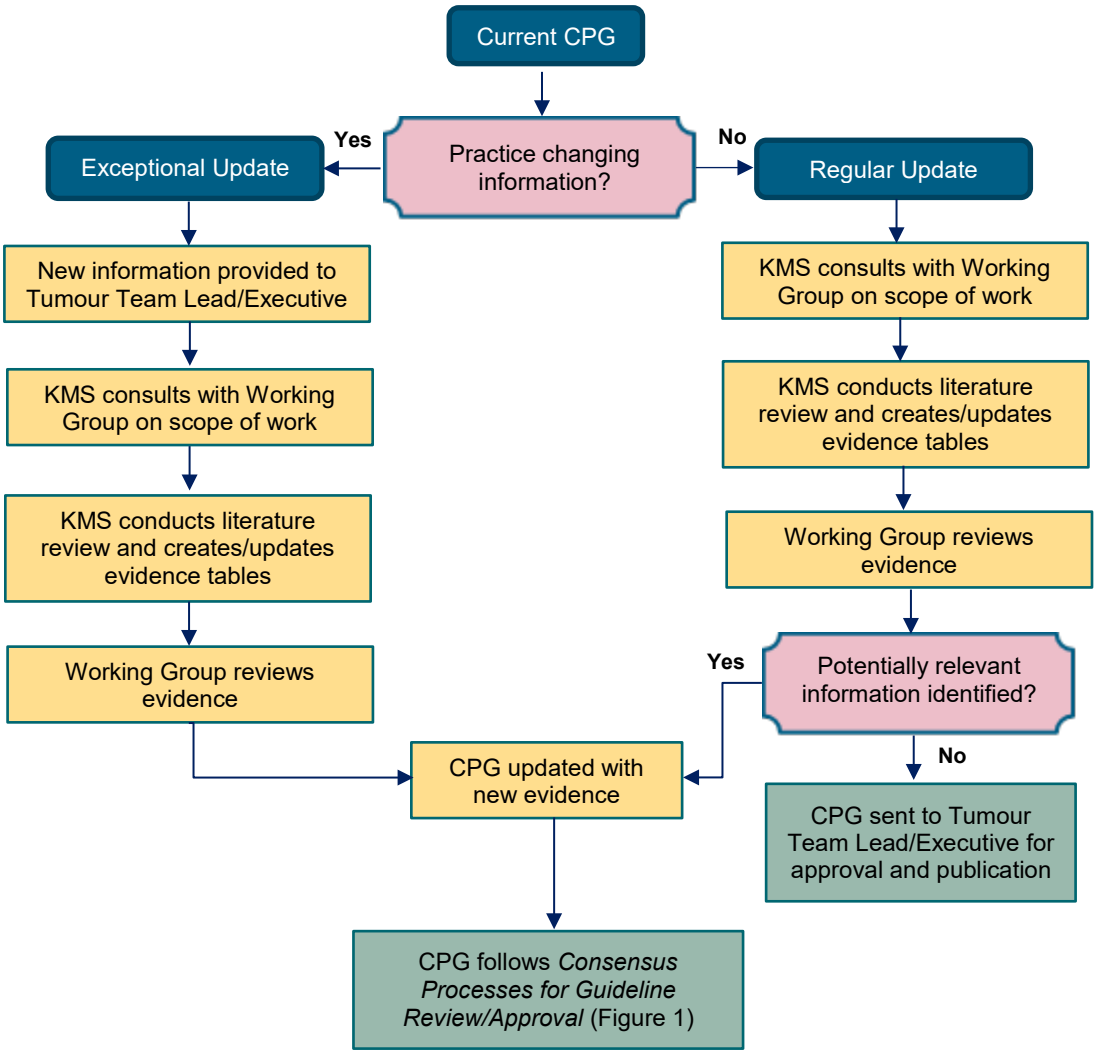
Guideline Maintenance

While some guideline topics are relatively stable and evolve at a slow rate, others may require more frequent review and updating; this may be as a result of publication of new evidence and outcomes, publication of a new or updated national/ international CPG, changes in the resources or funding available for an intervention, or changes in the availability of an intervention.[5] A regular review of each CPG is scheduled for 3-5 years from the publication date. However, the CPG may be updated earlier if new practice-changing information is identified before the regularly scheduled review date. Updates to the CPG may involve a full review of the entire document or a partial review and update of only specific recommendations,[6] as described in Table 8. The Working Group determines the type of update required, in consultation with the Tumour Team Lead and Executive members. Figure 2 describes the guideline updating processes. All CPGs and supporting materials are considered outdated 5 years after publication and will be withdrawn from the website and archived.

Table 8. Types of Guideline Updates

Full Update	• Majority of the CPG requires update • Many recommendations are no longer valid or do not apply • There are new areas of clinical significance for the majority of the guideline • Date of last review and version number of CPG are updated
Partial Update	• A portion of the CPG requires update • A minority of the recommendations are no longer valid or do not apply • There are new areas of clinical significance for only a portion of the CPG • Date of last review and version number of CPG are updated
No Update / Endorsement of Guideline	• No sections of the CPG require update • All recommendations remain valid • No new areas of clinical significance • Date of last review is updated and version number of CPG remains the same
Guideline Archived	• CPG is no longer relevant • Replaced by another CPG

Figure 2. Processes for Guideline Updates



Transparency

Management of Conflict of Interest: Beginning in late 2019, in accordance with the Guidelines International Network's *Principles for Disclosures of Interest and Management of Conflicts in Guidelines*,[7] all contributors and preparers of the CPGs and supporting materials are required to disclose all relevant conflicts of interest (COI) using the standard form from the International Committee of Medical Journal Editors (ICMJE). A discussion by the prospective Working Group members on how to manage any actual or potential COIs will take place prior to the group commencing their work on the CPG. The CPG document will include a description of the actual or potential COIs of each participant, as well as the steps taken to minimize their effect, as needed. Working group participants must meet all the following criteria in order to be listed as authors:

- has made a substantial contribution to the interpretation of evidence to support the recommendations in the CPG
- has helped to draft or revise the CPG
- has provided final approval of the version to be published
- has agreed to be accountable for all aspects of the CPG in ensuring that questions related to the accuracy or integrity of any part of the CPG are appropriately investigated and resolved.

Funding Source: Financial support for the development, maintenance, and revision of the CPGs and supporting materials comes from the Cancer Care Alberta operating budget. Members of the Working Groups are volunteers and do not receive stipends for their participation in guideline development activities, and the funding source does not influence the content of the CPG. Tumour Team members are reimbursed for travel-related expenses when attending Provincial Tumour Team meetings; funding for these meetings is provided by operational funds from Cancer Care Alberta and grant funds from the Alberta Cancer Foundation.

All cancer drugs described in the CPGs and supporting documents are funded in accordance with the Outpatient Cancer Drug Benefit Program, at no charge, to eligible residents of Alberta, unless otherwise explicitly stated. For a complete list of funded drugs, specific indications, and approved prescribers, please refer to the Outpatient Cancer Drug Benefit Program Master List.

References

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