



Guideline Summary NGC-9379

Guideline Title

Low-grade astrocytomas and oligodendrogliomas.

Bibliographic Source(s)

Alberta Provincial CNS Tumour Team. Low-grade astrocytomas and oligodendrogliomas. Edmonton (Alberta): Alberta Health Services, Cancer Care; 2012 May. 11 p. (Clinical practice guideline; no. CNS-003). [35 references]

Guideline Status

This is the current release of the guideline.

Scope

Disease/Condition(s)

Low-grade astrocytomas, oligodendrogliomas, and mixed oligoastrocytomas

Note: Throughout the guideline, the term "low-grade glioma" is used to describe World Health Organization (WHO) grade II astrocytomas, oligodendrogliomas, and mixed oligoastrocytomas.

Guideline Category

Management

Treatment

Clinical Specialty

Neurological Surgery

Neurology

Oncology

Radiation Oncology

Intended Users

Physicians

Guideline Objective(s)

To address multidisciplinary treatment options for low-grade astrocytomas, oligodendrogliomas, and mixed oligoastrocytomas

Target Population

Adults over the age of 18 years with low-grade astrocytomas, oligodendrogliomas, and mixed oligoastrocytomas

Interventions and Practices Considered

1. Surgical resection
2. Post-surgical radiotherapy
3. Chemotherapy (not recommended routinely as first-line therapy)
4. Temozolomide
5. Repeat surgical resection
6. Enrollment in clinical trial

Major Outcomes Considered

- Progression-free survival
- Overall survival

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Research Questions

Specific research questions to be addressed by the guideline document were formulated by the guideline lead(s) and Knowledge Management (KM) Specialist using the PICO question format (patient or population, intervention, comparisons, outcomes).

Guideline Questions

- What is the role of surgery in the management of low-grade gliomas?
- Which are the recommendations for radiotherapy in the management of low-grade gliomas?
- What is the role of chemotherapy in the management of low-grade gliomas?
- What treatment options are recommended for high risk patients with low-grade gliomas?

Search Strategy

For the development of the original guideline, medical journal articles were searched using the Medline (1950 to November Week 4, 2009), EMBASE (1980 to November Week 4), Cochrane Database of Systematic Reviews (3rd Quarter, 2009), and PubMed electronic databases; the references and bibliographies of articles identified through these searches were scanned for additional sources. The search terms included: Glioma [MeSH heading], Brain Neoplasms [MeSH heading], Astrocytoma [MeSH heading], Oligodendroglioma [MeSH heading], low-grade glioma, practice guidelines, systematic reviews, meta-analyses, randomized controlled trials, and clinical trials. Articles were excluded from the review if they: had a non-English abstract, were case studies involving less than 5 patients, involved pediatric patients, or were published prior to the year 2000. For the 2012 update of this guideline, medical journal articles were searched using Medline (2009 to May Week 1, 2012), EMBASE (2009 to May Week 1, 2012), Cochrane Database of Systematic Reviews, and PubMed (2009 to May Week 3, 2012) electronic databases with the same search terms and exclusion criteria.

A review of the relevant existing practice guidelines for low-grade gliomas, astrocytomas, and oligodendrogliomas was also conducted by accessing the practice guidelines on the websites of the British Columbia Cancer Agency (BCCA), National Comprehensive Cancer Network (NCCN), the Australian Cancer Network, Cancer Care Ontario, American Society of Clinical Oncology, European Society of Medical Oncology and the National Institute for Health and Clinical Excellence (NICE).

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Not stated

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Evidence was selected and reviewed by a working group comprised of members from the Alberta Provincial CNS Tumour Team and a Knowledge Management (KM) Specialist from the Guideline Utilization Resource Unit (GURU). A detailed description of the methodology followed during the guideline development process can be found in the [Guideline Utilization Resource Unit Handbook](#) (see the "Availability of Companion Documents" field).

Evidence Tables

Evidence tables containing the first author, year of publication, patient group/stage of disease, methodology, and main outcomes of interest are assembled using the studies identified in the literature search. Existing guidelines on the topic are assessed by the KM Specialist using portions of the AGREE II instrument (<http://www.agreetrust.org>) and those meeting the minimum requirements are included in the evidence document. Due to limited resources, GURU does not regularly employ the use of multiple reviewers to rank the level of evidence; rather, the methodology portion of the evidence table contains the pertinent information required for the reader to judge for himself the quality of the studies.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Formulating Recommendations

The working group members formulated the guideline recommendations based on the evidence synthesized by the Knowledge Management (KM) Specialist during the planning process, blended with expert clinical interpretation of the evidence. As detailed in the [Guideline Utilization Resource Unit Handbook](#) (see the "Availability of Companion Documents" field), the working group members may decide to adopt the recommendations of another institution without any revisions, adapt the recommendations of another institution or institutions to better reflect local practices, or develop their own set of recommendations by adapting some, but not all, recommendations from different guidelines.

The degree to which a recommendation is based on expert opinion of the working group and/or the Provincial Tumour Team members is explicitly stated in the guideline recommendations. Similar to the American Society of Clinical Oncology (ASCO) methodology for formulating guideline recommendations, the Guideline Utilization Resource Unit (GURU) does not use formal rating schemes for describing the strength of the recommendations, but rather describes, in conventional and explicit language, the type and quality of the research and existing guidelines that were taken into consideration when formulating the recommendations.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

This guideline was reviewed and endorsed by the Alberta Provincial Central Nervous System (CNS) Tumour Team.

When the draft guideline document is completed, revised, and reviewed by the Knowledge Management Specialist and the working group members, it is sent to all members of the Provincial Tumour Team for review and comment. The working group members then make final revisions to the document based on the received feedback, as appropriate. Once the guideline is finalized, it is officially endorsed by the Provincial Tumour Team Lead and the Executive Director of Provincial Tumour Programs.

Recommendations

Major Recommendations

Note: Throughout the guideline, the term "low-grade glioma" is used to describe World Health Organization (WHO) grade II astrocytomas, oligodendrogliomas, and mixed oligoastrocytomas.

1. In patients with a low-grade glioma and controlled epilepsy as the single symptom, surgery may be deferred until clinical or radiological progression.
2. Whenever possible, maximal surgical resection should be attempted in patients who have increased intracranial pressure, neurological deficits, uncontrollable seizures, or in those who have clinical or radiological progression.
3. For patients who undergo a complete surgical resection, radiotherapy may be deferred until clinical or radiological disease progression; in such cases, regular follow-up is essential.
4. Post-surgical radiotherapy may be administered to patients who undergo an incomplete surgical resection or biopsy only. When radiotherapy is indicated, the dose should be between 45 and 54 Gy, delivered in 1.8 to 2.0 Gy fractions.
5. Chemotherapy should not be routinely added to radiation therapy for first line treatment following surgery, since the combination shows limited benefit in comparison to radiotherapy alone following surgery, and may increase toxicity.
6. At disease progression or recurrence, the standard treatment is repeat surgical resection followed by radiotherapy. Temozolomide may also be considered for the treatment of disease recurrence, particularly for patients that harbour a combined chromosome 1p/19q loss of heterozygosity.
7. For high risk patients, inclusion in a clinical trial is recommended. In the absence of a clinical trial adjuvant chemotherapy and radiation therapy may be considered on an individual basis.

Clinical Algorithm(s)

None provided

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence supporting the recommendations is not specifically stated.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate use and timing of treatment interventions, such as chemotherapy, radiotherapy, surgery and/or clinical trial

Potential Harms

Radiation- and chemotherapy-associated toxicity

Qualifying Statements

Qualifying Statements

The recommendations contained in this guideline are a consensus of the Alberta Provincial CNS Tumour Team synthesis of currently accepted approaches to management, derived from a review of relevant scientific literature. Clinicians applying these guidelines should, in consultation with the patient, use independent medical judgment in the context of individual clinical circumstances to direct care.

Implementation of the Guideline

Description of Implementation Strategy

- Present the guideline at the local and provincial tumour team meetings and weekly rounds.
- Post the guideline on the Alberta Health Services website.
- Send an electronic notification of the new guideline to all members of Alberta Health Services, Cancer Care.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Timeliness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2012 May

Guideline Developer(s)

Alberta Health Services, Cancer Care - State/Local Government Agency [Non-U.S.]

Source(s) of Funding

Alberta Health Services, Cancer Care

Guideline Committee

Alberta Provincial Central Nervous System (CNS) Tumour Team

Composition of Group That Authored the Guideline

Not stated

Financial Disclosures/Conflicts of Interest

Participation of members of the Alberta Provincial CNS Tumour Team in the development of this guideline has been voluntary and the authors have not been remunerated for their contributions. There was no direct industry involvement in

the development or dissemination of this guideline. Alberta Health Services – Cancer Care recognizes that although industry support of research, education and other areas is necessary in order to advance patient care, such support may lead to potential conflicts of interest. Some members of the Alberta Provincial CNS Tumour Team are involved in research funded by industry or have other such potential conflicts of interest. However the developers of this guideline are satisfied it was developed in an unbiased manner.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) from the [Alberta Health Services Web site](#).

Availability of Companion Documents

The following is available:

- Guideline utilization resource unit handbook. Edmonton (Alberta): Alberta Health Services, Cancer Care; 2011 Dec. 5 p. Electronic copies: Available in Portable Document Format (PDF) from the [Alberta Health Services Web site](#).

Patient Resources

Not available

NGC Status

This NGC summary was completed by ECRI Institute on December 6, 2012. The information was verified by the guideline developer on January 14, 2013.

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