# Temozolomide Recurrent Therapy

## INDICATIONS FOR USE:

| INDICATION | ICD10 | Regimen Code | HSE approved reimbursement status* |
|---|---|---|---|
| Adult patients with Grade III or IV malignant glioma, such as glioblastoma multiforme or anaplastic astrocytoma, showing recurrence or progression after standard therapy. | C71 | 00342a | N/A |

* This applies to post 2012 indications

## TREATMENT:

*The starting dose of the drugs detailed below may be adjusted downward by the prescribing clinician, using their independent medical judgement, to consider each patients individual clinical circumstances.*

A treatment cycle comprises 28 days. Temozolomide is administered orally once daily for the first 5 days followed by a 23 day treatment interruption (total of 28 days) until disease progression or unacceptable toxicity develops

| Day | Drug | Dose | Route | Cycle (28 day) |
|---|---|---|---|---|
| 1-5 | Temozolomide | [a]200mg/m$^2$ ONCE daily | PO | Continuous |
| [a]In patients previously untreated with chemotherapy, temozolomide is administered orally at a dose of 200 mg/m$^2$ once daily for the first 5 days followed by a 23 day treatment interruption (total of 28 days).<br>In patients previously treated with chemotherapy, the initial dose is 150 mg/m$^2$ once daily, to be increased in the second cycle to 200 mg/m$^2$ once daily, for 5 days if there is no haematological toxicity | | | | |
| Temozolomide hard capsules should be administered in the fasting state.<br>The capsules must be swallowed whole with a glass of water and must not be opened or chewed.<br>If vomiting occurs after the dose is administered, a second dose should not be administered that day | | | | |
| If a dose is missed, the patient should make up that dose, unless the next dose is due within 12 hours. | | | | |

## ELIGIBILITY:

- Indications as above
- ECOG 0-2
- Adequate renal and hepatic function

## EXCLUSIONS:

- Patients with hypersensitivity to temozolomide or any of its listed excipients
- Hypersensitivity to dacarbazine
- Severe myelosuppression
- Significant hepatic dysfunction
- Pregnancy or breastfeeding

## PRESCRIPTIVE AUTHORITY:

The treatment plan must be initiated by a Consultant Medical Oncologist

## TESTS:

**Baseline tests**:

- FBC, renal and liver profile
- Blood glucose
- Virology screen -Hepatitis B* (HBsAg, HBcoreAb)

*(Reference Regimen Specific Complications for information on Hepatitis B reactivation)

**Regular tests**:

- FBC, renal and liver profile at day 1 of each cycle

**Disease monitoring:**

Disease monitoring should be in line with the patient's treatment plan and any other test/s as directed by the supervising Consultant.

## DOSE MODIFICATIONS:

- Any dose modification should be discussed with a Consultant.
- Dose reductions and discontinuations should be applied according to Tables 1 and 2.

**Table 1: Temozolomide dose levels for monotherapy treatment**

| Dose Level | Temozolomide Dose (mg/m$^2$) | Remarks |
|---|---|---|
| -1 | 100 | Reduction for prior toxicity |
| 0 | 150 | Dose during Cycle 1 |
| 1 | 200 | Dose during Cycles 2-6 in absence of toxicity |

**Table 2: Temozolomide dose reduction or discontinuation during monotherapy treatment**

| Toxicity | Reduce Temozolomide by 1 dose level[a] | Discontinue Temozolomide |
|---|---|---|
| ANC | < 1 x $10^9$/L | See footnote b |
| Platelets | < 50 x $10^9$/L | See footnote b |
| CTC non-haematological toxicity (except for alopecia, nausea, vomiting) | CTC Grade 3 | CTC Grade 4[b] |

[a]Temozolomide dose levels are listed in Table 1.

[b] Temozolomide is to be discontinued if:

- dose level -1 (100 mg/m$^2$) still results in unacceptable toxicity
- the same Grade 3 non-haematological toxicity (except for alopecia, nausea, vomiting) recurs after dose reduction.

**Renal and Hepatic Impairment:**

**Table 3: Dose modification of temozolomide in renal and hepatic impairment**

| Renal Impairment | | Hepatic Impairment | |
|---|---|---|---|
| **CrCl (mL/minute)** | **Dose** | **Impairment level:** | **Dose** |
| ≥ 36 | No dose adjustment is needed | Child-Pugh A/B: | No dose adjustment is needed |
| < 36 | No need for dose adjustment is expected | Child-Pugh C: | No need for dose adjustment is expected |
| Haemodialysis | No need for dose adjustment expected | | |
| Recommendations as per Giraud et al 2023 | | | |

## SUPPORTIVE CARE:

### EMETOGENIC POTENTIAL:

- As outlined in NCCP Classification Document for Systemic AntiCancer Therapy (SACT) Induced Nausea and Vomiting Available on the NCCP website

**Temozolomide**: Moderate to high (**Refer to local policy).**

**For information:**

**Within NCIS regimens, antiemetics have been standardised by the Medical Oncologists and Haemato-oncologists and information is available in the following documents:**

- NCCP Supportive Care Antiemetic Medicines for **Inclusion in NCIS** (Medical Oncology) - Available on the NCCP website
- NCCP Supportive Care Antiemetic Medicines for **Inclusion in NCIS** (Haemato-oncology) - Available on the NCCP website

### PREMEDICATIONS: None

### OTHER SUPPORTIVE CARE:

Temozolomide can have genotoxic effects. Therefore, men being treated with it should be advised not to father a child up to 6 months after receiving the last dose and to seek advice on cryoconservation of sperm prior to treatment, because of the possibility of irreversible infertility due to therapy with temozolomide.

## ADVERSE EFFECTS

- Please refer to the relevant Summary of Product Characteristics (SmPC) for details.

## REGIMEN SPECIFIC COMPLICATIONS

- **Hepatitis B Virus (HBV):** Hepatitis due to HBV reactivation, in some cases resulting in death, has been reported. Experts in liver disease should be consulted before treatment is initiated in patients with positive hepatitis B serology (including those with active disease). During treatment patients should be monitored and managed appropriately.

## DRUG INTERACTIONS:

- Current SmPC and drug interaction databases should be consulted for more information.

## REFERENCES:


1. Bower M, Newlands ES, Bleehan NM et al. Multicentre CRC phase II trial of temozolomide in recurrent or progressive high grade glioma. Cancer Chemother Pharmacol 1997;40:484-8.
2. Yung WKA, Prados MD, Yaya-Tur R et al. Multicenter phase II trial of temozolomide in patients with anaplastic astrocytoma or anaplastic oligoastrocytoma at first relapse. J Clin Oncol 1999;17:2762-71.
3. Giraud E L, Lijster B D, et al. Dose recommendations for anticancer drugs in patients with renal or hepatic impairment: an update. Available at: https://pubmed.ncbi.nlm.nih.gov/37269847/
4. NCCP Classification Document for Systemic Anti-Cancer Therapy (SACT) Induced Nausea and Vomiting. V6 2025. Available at: https://www.hse.ie/eng/services/list/5/cancer/profinfo/chemoprotocols/nccp-classification-document-for-systemic-anti-cancer-therapy-sact-induced-nausea-and-vomiting.pdf
5. Temozolomide (Temodal ®) Summary of Product Characteristics Accessed July 2025. Available at: https://www.ema.europa.eu/en/documents/product-information/temodal-epar-product-information_en.pdf


| Version | Date | Amendment | Approved By |
|---|---|---|---|
| 1 | 20/06/2016 | | Prof Maccon Keane |
| 2 | 20/06/2018 | Updated with new NCCP regimen template and clarified treatment table | Prof Maccon Keane |
| 3 | 15/07/2020 | Regimen review<br>Updated emetogenic potential | Prof Maccon Keane |
| 4 | 23/07/2025 | Reviewed. Updated exclusions section. Renal and Hepatic dose modifications updated to align with Giraud et al 2023. Regimen updated in line with NCCP standardisation. | Prof Maccon Keane |

Comments and feedback welcome at oncologydrugs@cancercontrol.ie.