

# BC Cancer Protocol Summary for Treatment of Elderly Newly Diagnosed Glioma Patient with Concurrent and Adjuvant Temozolomide and Radiation Therapy

**Protocol Code**

CNELTZRT

**Tumour Group**

Neuro-Oncology

**Contact Physician**

Dr. [Rebecca Harrison](#)

## ELIGIBILITY:

### Patients must have:

- Newly diagnosed malignant gliomas (grade 3 or 4), **and**
- Age greater than 70 (**elderly**), **or**
- Age **60 to 69 (younger)** but ineligible for CNAJTZRT or poor performance status (e.g., ECOG 2 to 3)

### Patients should have:

- ECOG 0-2
- Adequate renal and hepatic function

## CAUTION:

- Creatinine greater than 1.5 X normal
- Significant hepatic dysfunction

## TESTS:

- Baseline and before starting adjuvant temozolomide: CBC and differential, platelets, ALT, Bilirubin, serum creatinine, random glucose (patients on dexamethasone)
- During concomitant temozolomide with RT (dual modality):
  - Weekly CBC and differential for 4 weeks
  - Week 3: ALT and bilirubin
- Before each treatment of adjuvant temozolomide:
  - Day 1: CBC and differential, platelets, serum creatinine, ALT and bilirubin
  - Day 22: CBC and differential, platelets
- Before cycles #3 and 5 and at completion of adjuvant temozolomide: neuroimaging
- If clinically indicated: sodium, potassium, magnesium, calcium, random glucose

## PREMEDICATIONS:

- For concomitant temozolomide with RT (dual modality): ondansetron 8 mg given 30 minutes prior to first dose of temozolomide, then prochlorperazine 10 mg po 30 minutes prior to each subsequent dose of temozolomide
- For adjuvant temozolomide: ondansetron 8 mg po 30 minutes prior to each dose of temozolomide

**TREATMENT:**

Drug	Dose*	BC Cancer Administration Guideline
temozolomide	<p>Concomitant with RT: 75 mg/m<sup>2</sup> daily preferably 1 h prior to RT especially in the first week of treatment, and in A.M. on days without RT until completion of RT (usual duration 3 weeks)</p> <p>If Indicated: Adjuvant treatment starting 4 wks after RT: 150 mg/m<sup>2</sup> once daily x 5 d (d 1 to 5) every 28 d x 6 cycles</p>	PO

\* refer to [Temozolomide Suggested Capsule Combination Table](#) for dose rounding

- Dose may be increased to 200 mg/m<sup>2</sup> for the second cycle of adjuvant therapy if no significant hematologic, hepatic or other toxicity is noted (see below)
- Trimethoprim/sulfamethoxazole DS one tablet po q Monday, Wednesday and Friday is recommended for patients on concomitant or adjuvant temozolomide if requiring dexamethasone for longer than 4 weeks
- Discontinue for clinical or radiographic progression.

**DOSE MODIFICATIONS:****1. Hematological****For Concomitant Temozolomide with RT**

Weekly CBC:

ANC (x10 <sup>9</sup> /L)		Platelets (x10 <sup>9</sup> /L)	Dose
greater than or equal to 1.5	and	greater than or equal to 100	100%
1.0 to less than 1.5	or	75 to less than 100	Delay temozolomide until counts recover
less than 1.0	or	less than 75	Discontinue temozolomide

## For Adjuvant Temozolomide

Day 1:

ANC (x10 <sup>9</sup> /L)		Platelets (x10 <sup>9</sup> /L)	Dose
greater than or equal to 1.5	and	greater than or equal to 100	100%
less than 1.5	or	less than 100	Delay*

\* Follow CBC weekly and re-institute temozolomide at one dose level lower (150 mg/m<sup>2</sup> or 100 mg/m<sup>2</sup>) if ANC recovers to greater than 1.5 x 10<sup>9</sup>/L and platelets recover to greater than 100 x 10<sup>9</sup>/L within 3 weeks

Day 22:

ANC (x10 <sup>9</sup> /L)		Platelets (x10 <sup>9</sup> /L)	Dose
greater than or equal to 1.0	and	greater than or equal to 50	100%
less than 1.0	or	less than 50	Reduce one dose level**

\*\*Dose levels are 200 mg/m<sup>2</sup>, 150 mg/m<sup>2</sup> and 100 mg/m<sup>2</sup>

- Note: Dose reductions below 100 mg/m<sup>2</sup> are not permitted. Temozolomide should be discontinued for repeat grade 3 or 4 hematologic toxicity (ANC less than 1 x 10<sup>9</sup>/L, platelets less than 50 x 10<sup>9</sup>/L) at the 100 mg/m<sup>2</sup> dose.
- Renal dysfunction:** Dose modification required for creatinine greater than 2 x upper limit of normal. Reduce to 100 mg/m<sup>2</sup> and discontinue if no resolution of renal dysfunction at this dose.

### 3. Hepatic Dysfunction

#### For Concomitant Temozolomide with RT

Bilirubin (micromol/L)		ALT	Dose
less than 25	and	less than or equal to 2.5 x ULN	100%
greater than or equal to 25	or	greater than 2.5 x ULN	Delay***

\*\*\* Follow LFTs weekly and re-institute temozolomide at 75 mg/m<sup>2</sup> if Bilirubin recovers to less than 25 micromol/L and ALT recovers to less than or equal to 2.5 x ULN

Note: Dose reductions below 75 mg/m<sup>2</sup> are not permitted. Radiation Therapy to continue without temozolomide until recovery of LFTs.

#### For Adjuvant Temozolomide

Bilirubin (micromol/L)		ALT	Dose
less than 25	and	less than or equal to 2.5 x ULN	100%
25-85	or	2.6 – 5 x ULN	Reduce one dose level**
greater than 85	or	greater than 5 x ULN	Delay***

\*\* Dose levels are 200 mg/m<sup>2</sup>, 150 mg/m<sup>2</sup> and 100 mg/m<sup>2</sup>

\*\*\* Follow LFTs weekly and re-institute temozolomide at 100 mg/m<sup>2</sup> if Bilirubin recovers to less than 85 micromol/L and ALT recovers to less than 5 x ULN

- Note: Dose reductions below 100 mg/m<sup>2</sup> are not permitted. Temozolomide should be discontinued for repeat Bilirubin greater than 85 micromol/L and repeat ALT greater than 5 x ULN

## PRECAUTIONS:

1. **Neutropenia:** Fever or other evidence of infection must be assessed promptly and treated aggressively.
2. **Thrombocytopenia:** Day 22 platelet counts less than  $50 \times 10^9/L$  should be monitored at least twice weekly until recovering. Platelet counts less than  $20 \times 10^9/L$  and falling should be treated with platelet transfusion.
3. **Pneumocystis Jiroveci (previously Carinii) pneumonia (PJP):** Occasional reports of PJP in patients receiving concomitant or adjuvant Temozolomide have occurred. Prophylaxis as described above is recommended for patients receiving Temozolomide.

Call Dr. **Rebecca Harrison** or tumour group delegate at (604) 877-6000 or 1-800-663-3333 with any problems or questions regarding this treatment program.

## References:

Perry, JR, Laperriere N, O'Callaghan CJ, et al. A phase III randomized controlled trial of short-course radiotherapy with or without concomitant and adjuvant temozolomide in elderly patients with glioblastoma. J Clin Oncol 2016;34: LBA2 (Abstr).