# ANAPLASTIC ASTROCYTOMAS

# GEINO GUIDELINES 2016

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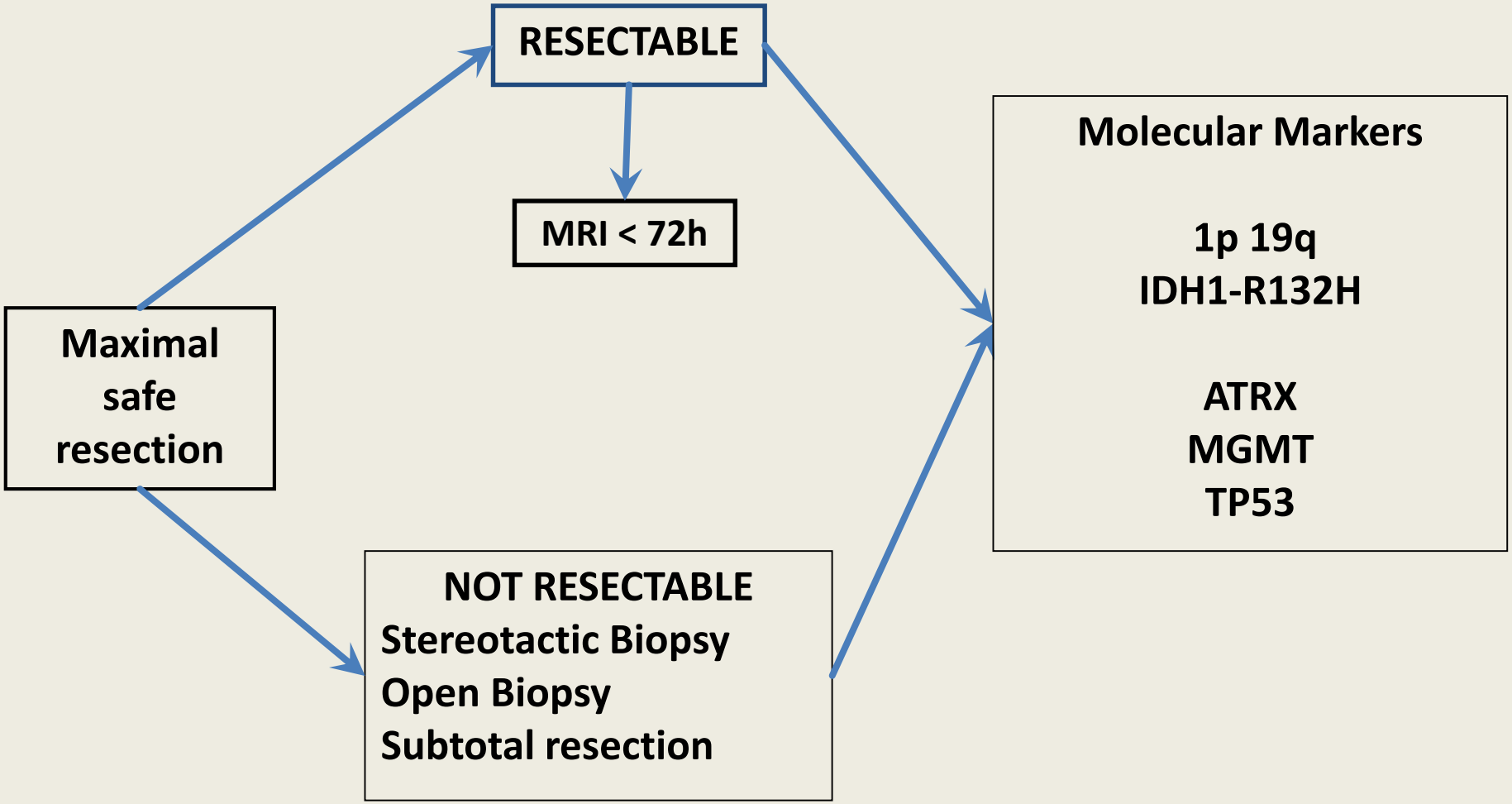
# GEINO GUIDELINES 2016 ANAPLASTIC ASTROCYTOMAS



# Classification 2016[1]

Anaplastic Astrocytoma IDH mutated

Anaplastic Astrocytoma IDH wild-type

Anaplastic Astrocytoma NOS (IHQ negative. No sequencing possible)

[1]David N. Louis et al. The 2016 World Health Organization Classification of Tumors of the Central Nervous System: a summary. Acta Neuropathol (2016) 131:803–820

**GEINO GUIDELINES 2016 ANAPLASTIC ASTROCYTOMAS**

**1st line treatment (I)**

**Anaplastic Astrocytoma**

**1p 19q NOT codeleted[1]**

**IDH mutated or wild-type[1-2]**
**MGMT methylated or not[1]**

Radiotherapy: 59.4 Gy in 33 fractions
followed by
TMZ: 150-200 mg/sqm days 1-5 every 4 weeks x 12 cycles

**(Level of evidence IA)**

[1]Martin J. Van Den Bent et al. Results of the interim analysis of the EORTC randomized phase III CATNON trial on concurrent and adjuvant temozolomide in anaplastic glioma without 1p/19q co-deletion: An Intergroup trial. J Clin Oncol 34, 2016 (suppl; abstr LBA2000)

[2] No information is available to date about this strategy (CATNON trial) based on IDH status so in not codeleted anaplastic astrocytoma this strategy is valid for IDH mutated and wild-type tumours

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## 1st line treatment (II)

**Anaplastic Astrocytoma** → **1p 19q codeleted**

- If 1p19q is codeleted, it should be considered and treated as an oligodendroglioma.
- ATRX deleted or mutated is the most characteristic molecular alteration in anaplastic astrocytomas indicating the astrocytic origin. If 1p19q codeletion exist, ATRX will be normally not deleted or mutated.
- Is important to check again the histology because it can be an oligodendroglioma or an oligoastrocytoma

**Treatment:**

**See Oligodendrogliomas / Oligoastrocytomas GEINO guidelines**

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## Follow up

No universal recommendation

An MRI can be suggested every 2-4 months for 2-3 years and then every 6 months.

Pay attention to pseudoprogression early after radiotherapy.

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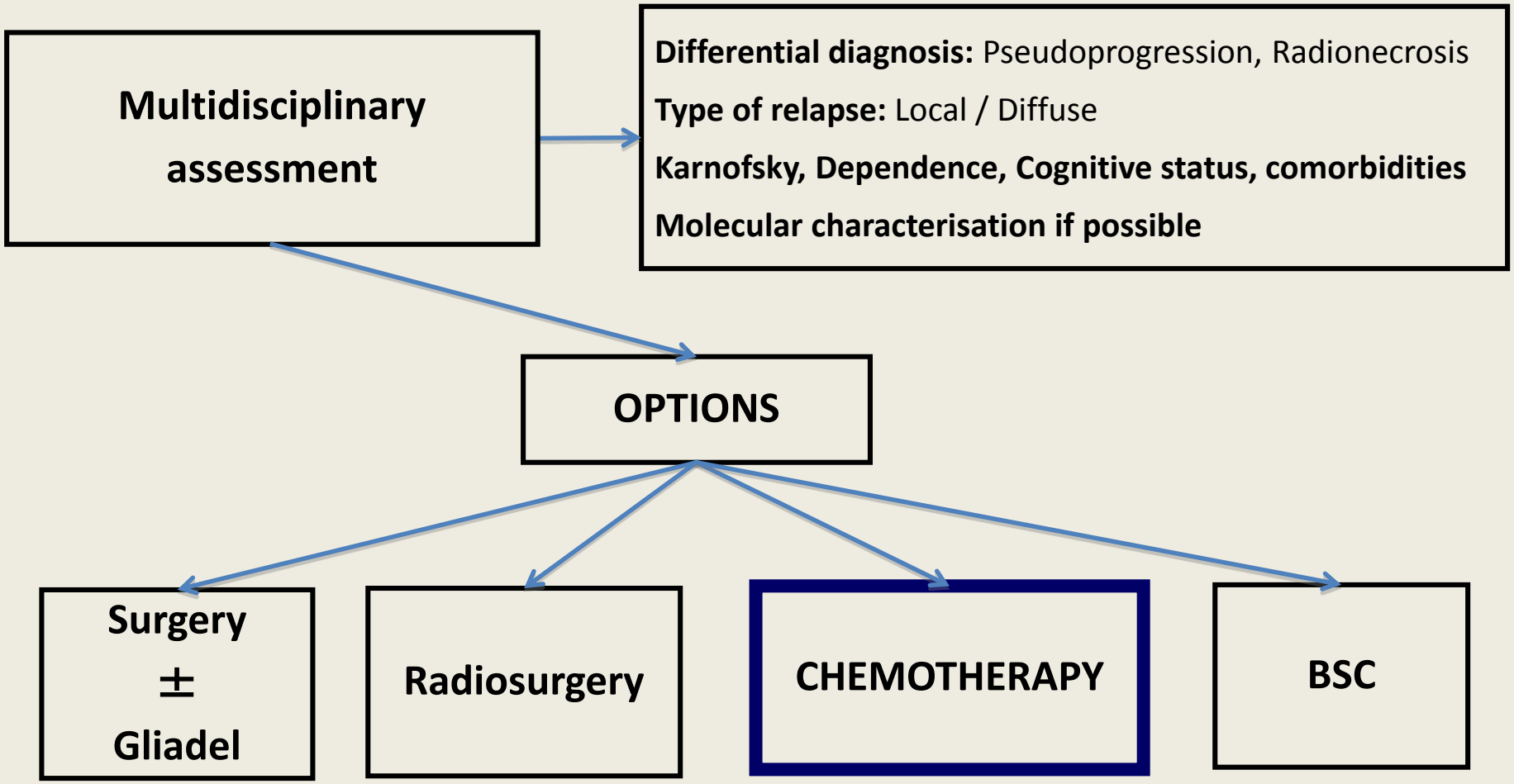
## Relapse / Progression (I)



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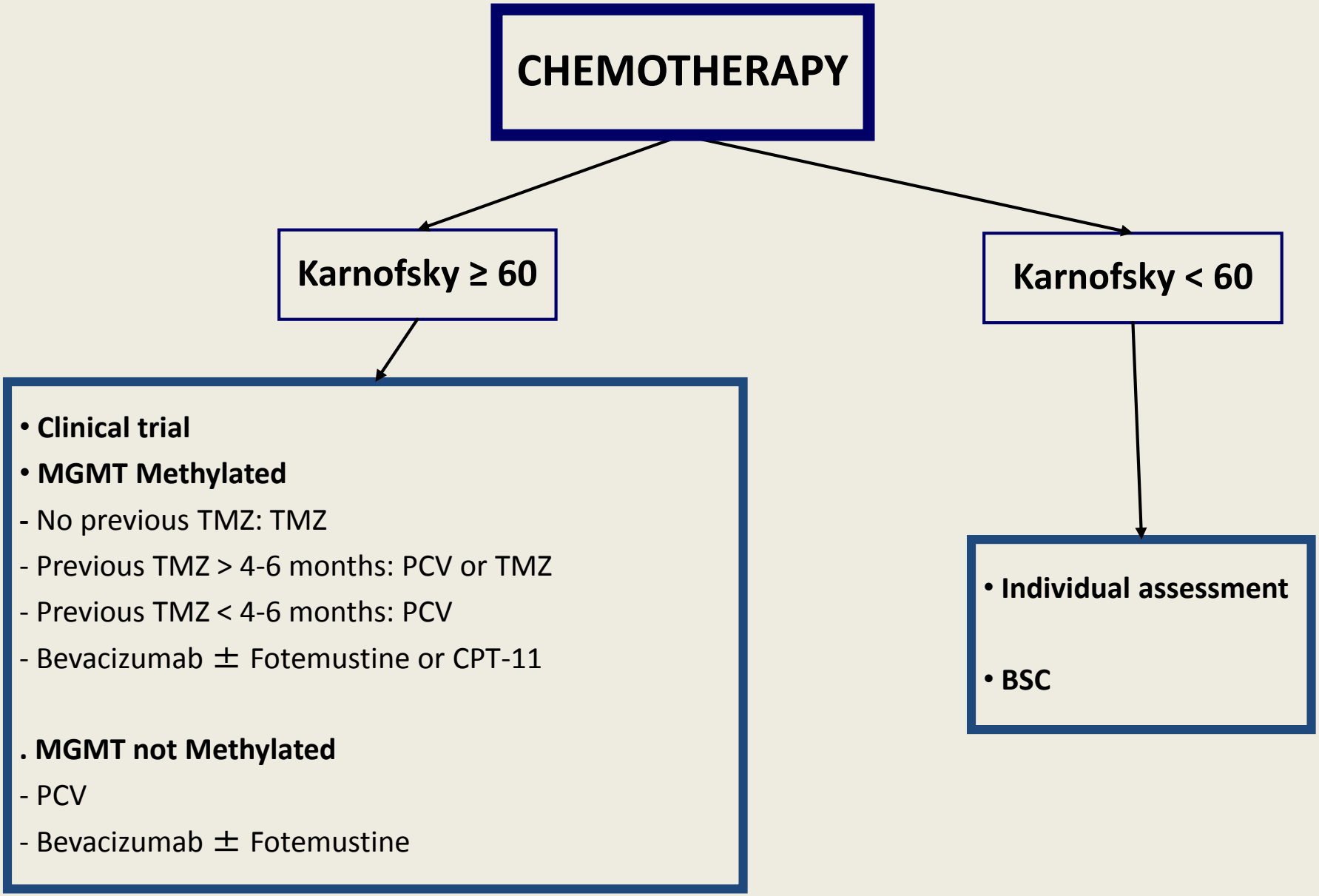
## Relapse / Progression (II)



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## Chemotherapy schedules

**Temozolomide**: 150mg square metre/day x 5 days the first cycle and if no grade 3-4 toxicity then 200 mg square metre/day x 5 days every 28 days

**PCV** (1 cycle every 6 – 8 weeks)
Lomustine: 110 mg square metre D1 (total dose 160 mg)
Vincristine: 2 mg D8 and 29
Procarbazine: 60 mg square metre D8 to D21

**Fotemustine (Addeo regime)**
Induction: 80 mg square metre Days 1, 15, 30, 45 and 60 followed by 4 weeks rest and then;
Maintenance: 80 mg square metre every 4 weeks

**Fotemustine + Bevacizumab**
Induction (Days 1, 15, 30, 45 and 60):
Fotemustine: 80 mg square metre and Bevacizumab: 10 mg/Kg
Maintenance (4 weeks after the last dose of Fotemustine)
Fotemustine: 80 mg square metre every 4 weeks and Bevacizumab: 10 mg/Kg every 14 days

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## Support

### Corticosteroids

- According to symptoms
- Minimum doses the least time possible (Attention to secondary effects)
- Progressive reduction, gastric protection and morning administration

### Anticonvulsants

- Prophylaxis: not recommended in the absence of seizures
- If necessary those belonging to enzymatic inductors are not recommended because of their interactions with chemotherapy
- Attention to secondary effects

### Endocrinopathies

- Common (corticosteroids, radiotherapy, surgery)

# GEINO GUIDELINES 2016 ANAPLASTIC ASTROCYTOMAS: Recommended references


David N. Louis et al. The 2016 World Health Organization Classification of Tumors of the Central Nervous System: a summary. Acta Neuropathol (2016) 131:803–820

**FIRST LINE TREATMENT**

Martin J. Van Den Bent et al. Results of the interim analysis of the EORTC randomized phase III CATNON trial on concurrent and adjuvant temozolomide in anaplastic glioma without 1p/19q co-deletion: An Intergroup trial. J Clin Oncol 34, 2016 (suppl; abstr LBA2000)

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**RELAPSES**

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W.K.A Yung et al. Multicenter Phase II Trial of Temozolomide in Patients With Anaplastic Astrocytoma or Anaplastic Oligoastrocytoma at First Relapse. J Clin Oncol 17:2762-2771. 1999

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R. Addeo et al. A new schedule of fotemustine in temozolomide-pretreated patients with relapsing glioblastoma. Epub 2010 Aug 10. JJ Neurooncol 2011. May 102(3):425