

Proton beam therapy COVID-19 framework

3 March 2020

1. General recommendations

- Be clear about the benefits you are hoping to achieve with proton beam therapy (compared to active surveillance or alternative treatment modalities). Clinical benefits should be considered on a case-by-case basis. Considerations should include age, anatomical site, dose, any concurrent treatment, as well as performance status and comorbidities. For paediatric radiotherapy, the decision-making tool in Appendix 1 of the [clinical commissioning policy](#) may be valuable, but the priorities and balance of gains may be very different from the normal situation.
- Be mindful that travelling for proton beam therapy and staying in apartment accommodation away from home (for six to eight weeks) needs careful consideration at this difficult time. The challenges of this should be explicitly stated to patients and their families.
- Patients/families should also be aware that the current situation with COVID-19 is rapidly changing and interruptions/delays to treatment may occur as well as delayed access, or inaccessibility, to some services. In the event of proton beam therapy service downtime, patients should also be counselled that any interruptions/delays may be longer than normal.
- The suitability of patients, as below, will continue to be assessed by the NHS England national clinical reference panels and the proton beam therapy service in Manchester.
- The indications outlined will be reviewed regularly to ensure as many patients as possible who might benefit from proton beam therapy have access to it.

- The situation regarding COVID-19 may rapidly change and affect the indications that the service can safely treat.
- These priorities will be necessary until the national emergency is passed **and/or** sufficient guaranteed capacity is available to the NHS England Proton Beam Therapy Programme.

2. The following are patient groups who would NOT be considered for proton beam therapy

- **Where irradiation of the whole craniospinal axis is required**
 - Medulloblastoma
 - Others
- **Where concurrent chemotherapy is required**
 - Nasopharyngeal carcinoma
 - Rhabdomyosarcoma
 - Ewing's sarcoma
 - Others
- **Indications where lower doses of radiation are required**
 - Hodgkin lymphoma
 - Neuroblastoma
 - Very rare other indications
- **Patients on active surveillance**
 - **Patients where focal irradiation to the brain is required**
 - Optic pathway and other selected low-grade glioma
 - Craniopharyngioma
 - Pituitary adenoma
 - Meningioma
 - Pineal parenchymal tumours (not pineoblastoma)

3. Prioritised indication categories for proton beam therapy

The general recommendations outlined in the introduction should be actively considered by both referrer and patient/patients' family. Consider the issues of referring patients for proton beam therapy especially where conventional radiotherapy would not result in loss of local control or survival rate.

- **Patients where focal irradiation to the brain is required**
 - Ependymoma
 - Localised germ cell tumours (includes whole ventricular radiotherapy)
 - Atypical teratoid rhabdoid tumours (completely excised, including EURAB)

- **Patients where dose-escalated treatment is only achievable with proton beam therapy**
 - Chordoma and chondrosarcoma near the base of skull
 - Chordoma and chondrosarcoma near the spine
 - pre and postop, definitive proton beam therapy for unresectable tumours for **selected** patients based on tumour volume, performance status and co-morbidities
 - Other base-of-skull tumours requiring dose escalation above what is achievable with photons

- **Patients where radiation as sole modality of treatment (not concurrent chemoradiation)**
 - Retinoblastoma
 - Esthesioneuroblastoma
 - Juvenile angiofibroma
 - Nasal cavity and paranasal sinus
 - Salivary gland tumours
 - Adenoid cystic carcinoma with perineural invasion
 - Adult type bone and soft tissue sarcoma

- **Patients on active surveillance who deteriorate clinically and/or tumours demonstrating aggressive behaviour**

Note: patients can be referred to the proton panel for consideration even if a previous application has been declined on the grounds of urgency.