

## Radiotherapy for melanoma in COVID-19 pandemic

*Authors: Agata Rembielak, Andrew Sykes, Kate Fife, Amarnath Challapalli, Jenny Nobes, Pat Lawton*

The current COVID-19 pandemic is unprecedented in living memory and is affecting everyone, including our patients. It is increasingly important to provide the optimal management for patients with different neoplasms, including malignant melanoma. RCR guidelines are intended to minimise the impact on patients and the healthcare system during this pandemic, including the services for melanoma treatment.

Surgery and or systemic treatments remain the mainstay of treatments for melanoma, but the COVID-19 pandemic has significantly reduced the ability of hospitals to deliver a normal service over recent weeks. This is affecting already overstretched radiotherapy departments, with increasing numbers of patients being referred for definitive radiotherapy. Capacity and demand analysis and forecasting is taking place almost daily in radiotherapy departments across the UK in an attempt to manage this.

We have put together the following guidance for the management of patients with melanoma in radiotherapy departments, taking into consideration the risks patients face from cancer, cancer-related treatment and from infection.

### General advice

- Individual treatment centres should follow the recently published “COVID-19 rapid guideline: delivery of radiotherapy” guidelines and adapt their strategy based upon staffing, capacity and structure. <https://www.nice.org.uk/guidance/NG162>.
- Discuss proposed changes to current treatment pathways within your local MDTs and specialist MDTs, and communicate effectively with the colleagues and patients any unforeseen consequences of COVID-19.
- Use the RCR Clinical Oncology online forums (COOF) to seek advice from colleagues.
- Clearly record all changes in standard management in the patient record and document discussion with the patient/family.
- Radiotherapy is rarely used as a definitive treatment modality in primary melanoma lesions. As a radical treatment it may be considered in patients with poor performance status and/or severe co-morbidities, where surgery is declined, or where surgery is not a viable option (e.g. inoperable mucosal melanoma)
- Special consideration should to be given to immunocompromised patients, including post-transplant, in whom the risk of contracting coronavirus 2 (SARS-CoV-2) and developing COVID-19 related complications is substantial. Carefully weigh the benefit of radiotherapy versus the risk of exposure to the virus. Consider deferring

radiotherapy, or using regular clinical monitoring, particularly in closely excised lesions.

- Consider hypofractionated radiotherapy regimens, where possible, to reduce the number of patient visits to hospital. This will reduce the risk of exposure to the virus for both patient and staff and the overall burden to radiotherapy departments
- Adjuvant systemic anticancer therapy (SACT) should be discussed at Skin / H&N SMDT level as usual. Please refer to RCR document: “Guidelines for follow-up and SACT for melanoma during COVID-19 pandemic”.  
<https://www.rcr.ac.uk/sites/default/files/melanoma-treatment-covid19.pdf>.

### **Radical radiotherapy**

- Malignant melanoma (MM) is not reliably radiosensitive therefore radiotherapy is rarely used in definitive setting. The exceptions include patients unfit for surgery, or inoperable mucosal melanomas. Where definitive radiotherapy is used, modified fractionation should be considered.
- Lentigo maligna (LM), Lentigo maligna melanoma (LMM) and melanoma in situ should be considered for deferred treatment in 2-3 months. These patients are generally elderly and should avoid hospitals wherever possible.

### **Adjuvant radiotherapy – primary site**

- Radiotherapy is rarely used in the post-operative setting. There may be occasions though, where postoperative margins are inadequate and further surgery is either contraindicated or the patient declines it. In high risk cases, with involved margins (<1mm) radiotherapy might be considered instead. Each case should be carefully assessed to balance the risk of exposure to COVID-19 virus against the risks of local recurrence.
- Patients with closely excised MM at high risk of recurrence could have clinical review by their referring surgeon/dermatologist in 3-4 months to consider the possibility of further surgery or adjuvant radiotherapy.

### **Adjuvant radiotherapy – nodal basin**

- Adjuvant nodal radiotherapy is not offered routinely for regional nodal metastases from cutaneous melanoma primary. It should be considered in regional metastases from mucosal primaries.
- While post-operative radiotherapy to involved nodal basins with high risk features (i.e. extracapsular spread, multiple or large nodes, recurrence after previous nodal surgery) can reduce the risk of local recurrence, there is no evidence that it alters long term survival. Many of these patients will now be candidates for adjuvant systemic therapy rather than radiotherapy. However, radiotherapy can be considered for patients at high risk of nodal recurrence, who are not candidates for systemic

adjuvant therapy after consideration by the SSMDT. There is evidence for 48Gy in 20# from the TROG 02.01 trial; 40Gy in 15# could be considered as a hypofractionated alternative. Each case should be carefully assessed to balance the risk of exposure to COVID-19 virus against the risk of regional recurrence.

## Palliative treatment

- Palliative radiotherapy should only be delivered where the benefits clearly outweigh current risks.
- Currently palliative radiotherapy is regarded as priority 4, where “*alleviation of symptoms would reduce the burden on other healthcare services*”. Consider using single fraction or shorter fractionated schedules, depending on the clinical scenario.
- Metastatic spinal cord compression may be priority 2 (“*urgent palliative radiotherapy in patients with malignant spinal cord compression who have useful salvageable neurological function*”). Departments should consider how they will deliver radiotherapy to NMSC patients who are Covid-19 positive, or suspected on clinical grounds.
- In oligometastatic intracranial disease consider stereotactic radiotherapy. Further guidance is included in RCR document “Guidance for Stereotactic Radiosurgery (SRS) During COVID-19 Pandemic”.  
<https://www.rcr.ac.uk/sites/default/files/stereotactic-radiosurgery-srs-covid19.pdf>.
- In oligometastatic extracranial disease please refer to SABR Consortium UK website (considering NICE radiotherapy prioritisation document).  
<https://www.sabr.org.uk/wp-content/uploads/2019/04/SABRconsortium-guidelines-2019-v6.1.0.pdf>
- For standard palliative radiotherapy (excluding brain metastases) consider 20Gy in 4# instead of 20Gy in 5#, 30Gy in 8# instead of 30 in 10# or single fraction of 8-10 Gy (e.g. in bleeding or fungating skin nodules).
- Close liaison between medical oncologists specialising in melanoma and clinical / radiation oncology colleagues is particularly important at this time. Symptomatic patients may be helped by palliative radiotherapy if they are not suitable for or not responding to SACT.
- SACT in melanoma, including in palliative setting, has been covered in RCR document, “[Guidelines for follow-up and SACT for melanoma during COVID-19 pandemic](https://www.rcr.ac.uk/sites/default/files/melanoma-treatment-covid19.pdf)”. <https://www.rcr.ac.uk/sites/default/files/melanoma-treatment-covid19.pdf>.
- In some patients best supportive care may be the most appropriate management.

## Other resources of advice

BAD <http://www.bad.org.uk/healthcare-professionals/covid-19>

BAOMS [https://www.baoms.org.uk/professionals/omfs\\_and\\_covid-19.aspx](https://www.baoms.org.uk/professionals/omfs_and_covid-19.aspx)

BAPRAS <http://www.bapras.org.uk/docs/default-source/covid-19-docs/corona-virus---melanoma---final-version-2.pdf?sfvrsn=2>

## References

1. Clinical guide for the management of non-coronavirus patients requiring acute treatment: Cancer 23 March 2020 Version 2  
<https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/specialty-guide-acute-treatment-cancer-23-march-2020.pdf>
2. [Mahadevan A](#), Patel VL, [Dagoglu N](#). Radiation therapy in the management of malignant melanoma. *Oncology (Williston Park)* 2015; 29(10):743-751.  
<https://www.cancernetwork.com/melanoma/radiation-therapy-management-malignant-melanoma>
3. Melanoma Focus. <https://melanomafocus.com/members/coronavirus-info-professionals/>
4. Henderson MA et al. Adjuvant lymph-node field radiotherapy versus observation only in patients with melanoma at high risk of further lymph-node field relapse after lymphadenectomy (ANZMTG 01.02/TROG 02.01): 6-year follow-up of a phase 3, randomised controlled trial. *Lancet Oncol* 2015; 16(9):1049-1060.