# Clinical Oncology

## Skin cancer

## RCR consensus statements

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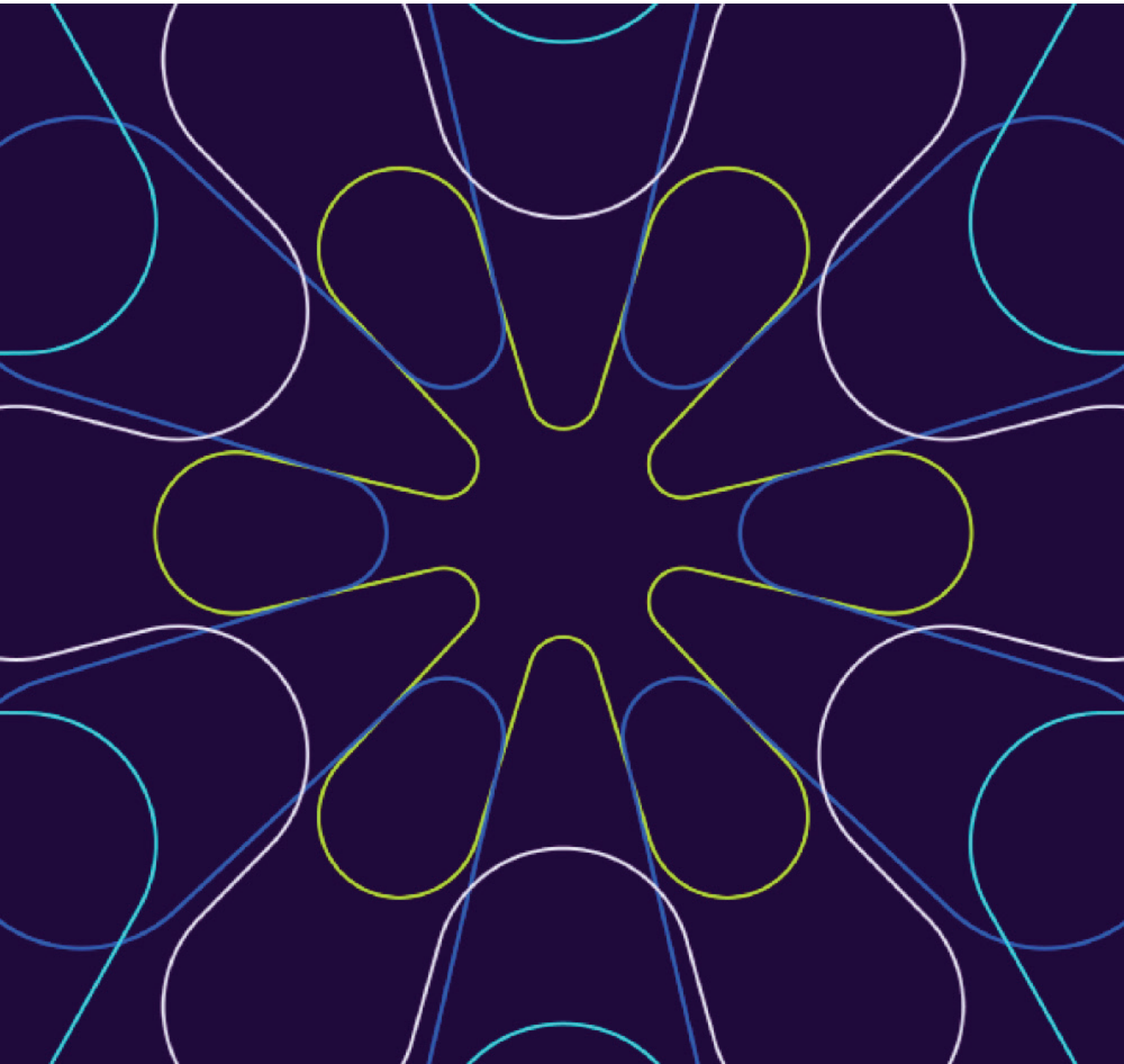
The Royal College of Radiologists



# Contents

# The RCR skin cancer consensus statements

These statements should be read in conjunction with the accompanying explanatory notes.

## Topic 1: General principles

### Topic 1A: Optimisation of skin cancer pathway

1.1 Commence postoperative radiotherapy within three months of surgery for largest benefit in keratinocyte cancers providing that the surgical area has sufficiently healed by the time radiotherapy starts. This is particularly important for cutaneous squamous cell carcinoma (cSCC) and less evidenced for basal cell carcinoma (BCC) and rare skin cancers.

1.2 Commence postoperative radiotherapy within eight weeks for fast-growing tumours such as Merkel cell carcinoma.

1.3 Before delivering adjuvant radiotherapy – especially if the start of treatment has been delayed by referral or patient factors – perform a detailed assessment for locoregional recurrence, which may include restaging scans if clinically indicated.

1.4 Consider omitting postoperative radiotherapy in low-risk BCC with close (<1 mm) margins unless it is difficult to monitor the area clinically or surgery for local recurrence would be unacceptable to the patient.

### Topic 1B: Frailty and oncogeriatrics

1.5 Consider using a screening tool such as the Rockwood Clinical Frailty Score (CFS) to complement the clinical assessment of older patients. Comorbidities or age should not be seen as absolute contraindications to radiotherapy and an oncogeriatric approach should be taken. Refer to the RCR document Frailty in Cancer Care – UK Expert Consensus Framework for further information.

1.6 Consider not treating slow-growing BCC if unlikely to become symptomatic during the patient's expected lifespan or to contribute to morbidity. If treatment is not undertaken, there must be safety netting to ensure that such patients are reassessed for treatment if their lesions become more troublesome.

1.7 Biopsy is essential before treating with radical-dose radiotherapy for keratinocyte cancers. In select circumstances, radiotherapy treatment may be considered without a biopsy where the patient has been seen by a member of the skin multidisciplinary team (MDT) who is competent in the clinical diagnosis of skin cancer and discussions with the treating oncologist, patient or family are thoroughly documented. The case may also benefit from skin MDT discussion and documentation.

### Topic 1C: Toxicity management, cosmesis and functionality

1.8 Avoid radical-dose radiotherapy to sites at high risk of poor healing, such as the pretibial fascia. Palliative doses may be considered where there are no other surgical or non-surgical options.

1.9 Offer patients receiving complex oncological treatment for skin cancer a named key worker. This could be a specialist nurse or a skin specialist radiographer.

1.10 Recommend peer support for clinicians working in skin cancer for radiotherapy planning and case discussion. This should be job planned appropriately.

## Topic 2: Squamous cell carcinoma

### Topic 2A: Management of primary and nodal squamous cell carcinoma (SCC)

2.1 **Primary:** Consider primary radiotherapy as definitive treatment for biopsy-proven T1 and T2 cSCC, though surgery remains the gold standard for the majority of patients. Radiotherapy should be considered if there are patient or tumour factors favouring radiotherapy, such as patient choice, morbidity of treatment, functionality and cosmesis. This is especially important in sites such as the cutaneous or dry vermillion lip.*

2.2 Do not routinely treat T4 keratinocyte cancers with primary radical radiotherapy. These patients should be managed with multi-modality treatment or systemic anti-cancer therapy where the patient is not suitable for surgery, or the morbidity of treatment is unacceptable to the patient.*

2.3. Recommend adjuvant radiotherapy where there is an incompletely excised (pathological margin <1 mm or involved) cSCC and where further surgery to achieve margin clearance is not possible, or where the patient has declined further surgery, unless the MDT has agreed complete excision (eg where galea has been taken and is negative).*

2.4. Consider adjuvant radiotherapy or entry into a suitable clinical trial in patients with completely excised high-risk or very high-risk cSCC as defined by British Association of Dermatologists (BAD) guidelines (or international equivalent).

2.5. Consider adjuvant radiotherapy for patients on immunosuppression, especially if additional high-risk features are present, on a case-by-case basis.*

2.6. Consider adjuvant radiotherapy for all locally recurrent cSCC where radiotherapy was not given at time of primary excision.*

2.7 Offer adjuvant radiotherapy following nodal dissection, particularly where there are ≥2 positive nodes, extracapsular spread, an involved lymph node over 3 cm in size or a <1 mm margin on an involved nodal dissection.*

2.8 Do not routinely offer elective nodal irradiation in high-risk node-negative cSCC.

2.9 Do not routinely offer postoperative nodal irradiation to patients with single <3 cm nodal metastases without extracapsular spread.

*Other modalities may also be appropriate based on emerging clinical practice.

### Topic 2B: Management of advanced cSCC (acSCC)

2.10 Discuss all patients with acSCC within an MDT involving input from an oncologist with expertise in treating people with skin cancer. Where possible, joint consultations with surgeons, dermatologists and oncologists are the gold standard when advising patients with acSCC on their treatment options.

2.11 Consider systemic anti-cancer therapy for all suitably fit patients with acSCC, including those with immunocompromise or immunosuppression, after appropriate counselling and discussion with the treating (eg transplant) team, if risk or benefit favours treatment.

2.12 Consider radiotherapy or surgery for acSCC patients on immunotherapy for symptom management, control of oligoprogression or where disease has become radically treatable.

## Topic 3: Merkel cell carcinoma, melanoma and rare tumours

### Topic 3A: Merkel cell carcinoma (MCC)

3.1 Offer adjuvant radiotherapy to the primary site in resected stage 1 and stage 2 MCC. Consider omitting in patients with stage 1 disease treated with at least ≥1 cm-wide local excision plus negative sentinel lymph node biopsy (SLNB) plus no high-risk features (immunosuppression, head and neck site and lymphovascular invasion).

3.2 Offer adjuvant radiotherapy to the primary site and draining nodal basin for people with resected stage 3a or stage 3b MCC. Offer radiotherapy in preference to completion nodal dissection for sentinel lymph node-positive disease.

3.3 Consider prophylactic nodal radiotherapy in high-risk stage 1 and stage 2 patients who do not undergo SLNB or when SLNB is considered less reliable, particularly for patients who are immunosuppressed.

3.4 Consider adjuvant radiotherapy as an alternative to surgery for patients with incompletely resected disease where re-excision would be morbid. Consider radical radiotherapy for patients with stage 1 to stage 3 disease where surgery is not preferred due to patient factors such as patient choice, morbidity of treatment, functionality and cosmesis.

### Topic 3B: Use of radiotherapy in lentigo maligna melanoma (LMM), primary and nodal melanoma

3.5 Do not routinely offer radiotherapy for *in situ* or invasive cutaneous melanoma, but this can be considered where surgical resection is not possible, or as adjuvant treatment following resection of desmoplastic melanoma. In both cases, doses should be more than 50 GY in 2 GY fractions or a hypofractionated equivalent.

3.6 Do not routinely offer adjuvant radiotherapy in node-positive cutaneous melanoma; systemic anti-cancer therapy should be considered for these patients. Reserve adjuvant radiotherapy for patients with high risk of nodal relapse in whom systemic anti-cancer therapy is contraindicated, declined or where disease has recurred locoregionally despite it.

## Topic 3C: Use of radiotherapy in oligoprogressive melanoma

3.7 Consider hypofractionated radiotherapy, such as stereotactic, intensity-modulated radiation therapy (IMRT) or volumetric modulated arc therapy (VMAT), in oligoprogressive metastatic cutaneous melanoma on systemic anti-cancer therapy.

3.8 Consider using radiotherapy concurrently with checkpoint inhibitor therapy for symptomatic disease, given an increased response rate in this context. Hypofractionated regimes are preferred to conventional fractionation. Caution should be exercised given emerging data on toxicity.

## Topic 3D: Rare tumours

3.9 **Dermatofibrosarcoma protuberans (DFSP)**

Recommend primary surgical management but consider adjuvant radiotherapy in the presence of high-risk factors (<1 mm or positive margins where re-excision is not possible, recurrent tumour, fibrosarcomatous transformation).

3.10 **Skin adnexal carcinomas (sweat gland, sebaceous, follicular carcinomas)**

Recommend primary surgical management, but offer radiotherapy where surgery is not possible due to patient factors such as patient choice, morbidity of treatment, functionality and cosmesis and where systemic anti-cancer therapy has poor efficacy. Consider adjuvant radiotherapy where there are high-risk features (perineural invasion, invasion into fat or bone, lymphovascular spread, lymph node spread) and positive or close margins where further excision is not feasible. Consider radical radiotherapy for unresectable local recurrence.

# Introduction

The Royal College of Radiologists (RCR) consensus statements are developed to support clinicians in areas of practice where the evidence base is limited or evolving. Their purpose is to promote consistency in clinical practice, reduce unwarranted variation in cancer care and support progression towards best practice across the UK.

These skin cancer consensus statements build on the RCR's established programme of work in other tumour sites and have been developed using a robust and transparent consensus methodology, outlined below.

The statements are intended to be used by multidisciplinary teams (MDTs) to support service development, stimulate local quality improvement and promote shared learning, including for trainees. They should be interpreted in conjunction with relevant national and international guidelines, all of which have been considered during their development.

A national survey of UK skin cancer practice was undertaken by the committee to which 31 centres responded and was used to inform the consensus process and underpin a number of the recommendations. Key findings included:

- Oncological care being delivered by sole providers in six centres, with only 40% of clinicians reporting access to timetabled consultant peer review and/or complex case discussion.
- One third of centres reporting either no specialist nurse support, or provision limited to dermatological and surgical components of the patient pathway.
- Specialist support for patients undergoing oncological management being largely restricted to melanoma in many centres, with limited or absent provision for other skin cancer types.
- Lack of access to superficial X-ray radiotherapy (SXR) in approximately one quarter of centres.

The committee is grateful to Fionnuala Morrissey for her support in the development of this work. We also acknowledge the considerable time, commitment and expertise contributed by committee members, stakeholders and participants in the consensus meeting.

**Dr Grant Stewart and Dr Petra Jankowska**

# Purpose and scope of the RCR consensus statements

The RCR consensus statements are developed to support clinical decision-making in areas of practice where the evidence base is limited, evolving or does not lend itself to formal guideline development. They aim to reduce unwarranted variation in UK radiotherapy practice and to promote safe, high-quality, patient-centred care.

Consensus statements differ from formal clinical practice guidelines. While both provide recommendations to support best practice, clinical guidelines are typically underpinned by systematic reviews of high-quality evidence. Consensus statements are most appropriate where such evidence is lacking, conflicting or incomplete, and where expert agreement offers the most pragmatic approach to addressing variation in clinical practice.

## Development methodology

The RCR consensus statements are produced using a structured and transparent methodology, informed by available evidence and expert clinical judgement. For this project, a multidisciplinary steering group was convened to oversee development and ensure relevance across clinical practice.

The steering group included clinical oncologists with expertise in skin cancer, alongside representation from medical oncology, radiography, plastic surgery and dermatology. The group was tasked with identifying topics where there was recognised variation in UK practice and where existing national or international guidance did not fully address radiotherapy-specific issues. Duplication of existing guidance was avoided unless there was a clear rationale for emphasis or clarification.

Three overarching topic areas were agreed:

- General principles of skin cancer radiotherapy
- Cutaneous squamous cell carcinoma
- Merkel cell carcinoma, melanoma and rare skin tumours

Following a targeted appraisal of the available literature, draft statements were developed and iteratively refined over a six-month period.

## Evidence base and survey of practice

In keeping with the RCR methodology, statement development was informed by both published evidence and contemporary UK practice. A national survey of UK skin cancer radiotherapy practice was undertaken using a survey methodology to capture variation in service provision, clinical pathways and treatment approaches.

Findings from the survey were used to contextualise the draft statements, identify areas of divergence and ensure that recommendations were grounded in real-world service delivery considerations.

## Stakeholder engagement and consultation

Skin cancer leads from all UK cancer centres were invited to review the draft consensus statements locally with their multidisciplinary skin cancer teams and provide structured feedback. All feedback received was reviewed in detail by the steering group, and the statements and supporting explanatory notes were revised accordingly.

Revised draft statements were circulated to all skin cancer leads in advance of the national consensus meeting to allow adequate time for consideration and local discussion.

## Consensus meeting and voting process

A national virtual consensus meeting was held on 25 November 2025. Skin cancer leads from UK cancer centres were invited to attend and vote on behalf of their centre. Representatives from 45 centres participated. The meeting also included a skin cancer patient representative, Patricia Fairbrother from Independent Cancer Patients Voice, who opened the meeting and contributed the patient perspective.

Topic 1 was discussed in a whole-group session, including a presentation on anatomical considerations. Topics 2 and 3 were discussed initially in facilitated breakout groups, followed by plenary discussion. Statements were refined where necessary in response to discussion.

Each centre cast a single vote per statement. Where wording required further clarification, statements were revised and voted on again.

### Definition of consensus

Voting categories were predefined to indicate the strength of agreement with each statement. Consensus was defined *a priori* as agreement by at least 70% of participating centres, in line with established RCR consensus methodology.

| | |
|---|---|
| Unanimous support | 100% |
| Very strongly supported | 90–99% |
| Strongly supported | 70–89% |
| Majority support | 60–69% |
| Equipoise | 50–59% |
| Rejected | <50% |

Members of the steering group took notes of the discussion. The final statements were then approved by the RCR's Professional Practice Board for publication.

### Wording the consensus statements

The RCR statements have been worded to make them concise, unambiguous and easy to translate into practice.

The wording of the RCR statements is based on the National Institute for Health and Care Excellence (NICE) technical manual.

Each statement starts with a verb describing what the reader should do. The verb chosen reflects the strength of the recommendation.

- Statements that should (or should not) be offered use directive language such as 'offer' (or 'do not offer'), 'delineate', 'omit', 'treat' and so on.
- If there is a closer balance between benefits and harms the statement starts with 'consider'. These are recommendations for activities or interventions that *could* be used but where discussion with clinical teams and the patient, carefully considering the alternatives, is advised.

# 01 General principles

## Topic 1 statements

| Statement | | Voting outcome |
|---|---|---|
| **Topic 1A: Optimisation of skin cancer pathway** | | |
| 1.1 | Commence postoperative radiotherapy within three months of surgery for largest benefit in keratinocyte cancers providing that the surgical area has sufficiently healed by the time radiotherapy starts. This is particularly important for cutaneous squamous cell carcinoma (cSCC) and less evidenced for basal cell carcinoma (BCC) and rare skin cancers. | 98% – very strongly supported |
| 1.2 | Commence postoperative radiotherapy within eight weeks for fast-growing tumours such as Merkel cell carcinoma (MCC). | 98% – very strongly supported |
| 1.3 | Before delivering adjuvant radiotherapy – especially if the start of treatment has been delayed by referral or patient factors – perform a detailed assessment for locoregional recurrence, which may include restaging scans if clinically indicated. | 100% – unanimously supported |
| 1.4 | Consider omitting postoperative radiotherapy in low-risk BCC with close (<1 mm) margins unless it is difficult to monitor the area clinically or surgery for local recurrence would be unacceptable to the patient. | 96% – very strongly supported |
| **Topic 1B: Frailty and oncogeriatrics** | | |
| 1.5 | Consider using a screening tool such as the Rockwood Clinical Frailty Score (CFS) to complement the clinical assessment of older patients. Comorbidities or age should not be seen as absolute contraindications to radiotherapy and an oncogeriatric approach should be taken. Refer to the RCR document *Frailty in Cancer Care – UK Expert Consensus Framework* for further information. | 89% – strongly supported |
| 1.6 | Consider not treating slow-growing BCC if unlikely to become symptomatic during the patient's expected lifespan or to contribute to morbidity. If treatment is not undertaken, there must be safety netting to ensure that such patients are reassessed for treatment if their lesions become more troublesome. | 96% – very strongly supported |
| 1.7 | Biopsy is essential before treating with radical-dose radiotherapy for keratinocyte cancers. In select circumstances, radiotherapy treatment may be considered without a biopsy where the patient has been seen by a member of the skin MDT who is competent in the clinical diagnosis of skin cancer and discussions with the treating oncologist, patient or family are thoroughly documented. The case may also benefit from skin MDT discussion and documentation. | 89% – strongly supported |

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General principles

| Statement | | Voting outcome |
|---|---|---|
| **Topic 1C: Toxicity management, cosmesis, functionality** | | |
| 1.8 | Avoid radical-dose radiotherapy to sites at high risk of poor healing, such as the pretibial fascia. Palliative doses may be considered where there are no other surgical or non-surgical options. | 87% – strongly supported |
| 1.9 | Offer patients receiving complex oncological treatment for skin cancer a named key worker. This could be a specialist nurse or a skin specialist radiographer. | 96% – very strongly supported |
| 1.10 | Recommend peer support for clinicians working in skin cancer for radiotherapy planning and case discussion. This should be job planned appropriately. | 100% – unanimous support |

# Topic 1 explanatory notes

## Statement 1.1

Keratinocyte carcinoma (KC) refers to skin cancers arising from the outer epidermal layer of the skin, including BCC and cSCC. This term is increasingly preferred to 'non-melanoma skin cancer' (NMSC) to avoid confusion with other cutaneous malignancies, such as adnexal tumours and skin sarcomas.

It is acknowledged that individual services may find it challenging to achieve both availability of results and referral to clinical oncologists within 12 weeks of surgery; however, this time frame remains the gold standard that the committee believes services should aspire to meet. The evidence underpinning this recommendation is extrapolated from head and neck mucosal SCC, where delays in commencing postoperative radiotherapy beyond six to seven weeks are associated with poorer local control and survival. Although this has not been validated in keratinocyte-specific clinical trials, it represents the considered expert consensus of the group. Delays are of greatest concern in cases with rapidly proliferating preoperative disease, gross residual tumour, nodal involvement or extensive perineural invasion.

The concept of a wound being 'sufficiently healed' for the safe delivery of radiotherapy is complex and depends on the method of wound closure. Excision sites that heal by secondary intention may do so slowly, while wounds following close or positive excision of cSCC may demonstrate delayed healing due to persistent tumour. In such situations, the treating clinician must exercise clinical judgement, balancing the risks and benefits of delivering radiotherapy to an unhealed wound. Similarly, wounds that have undergone delayed reconstruction with flaps or grafts and are still healing should generally wait until healing is complete, rather than adhering rigidly to a 12-week time frame that may increase the risk of wound breakdown or graft failure.

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General principles

## Statement 1.2

All international guidelines recommend postoperative radiotherapy (PORT) for MCC, as it is associated with significant improvements in locoregional control and overall survival compared with surgery alone. Evidence suggests that delays of more than eight weeks between surgery and PORT are detrimental to locoregional control. Surgical wounds should be fully healed before radiotherapy is delivered, and the surgical approach should be planned with the aim of facilitating timely and uncomplicated healing to avoid unnecessary delays.

## Statement 1.3

This statement acknowledges that some areas of the UK are experiencing significant pressures in delivering timely pathology results, with the consequence that tumour recurrence may already have occurred by the time patients are reviewed by oncology services.

## Statement 1.4

Low risk is defined here as nodular BCC without micronodular or infiltrative components that are not on high-risk sites such as the ear and lip. This approach is consistent with the role of curettage in the management of nodular BCCs, which is outlined in the British Association of Dermatologists (BAD) and NICE guidance for skin cancer.

## Statement 1.5

Skin cancer predominantly affects older people. Management decisions should not be based on chronological age alone, but should consider physiological reserve, frailty, estimated life expectancy, comorbidities and polypharmacy, patient preferences and social circumstances. The potentially aggressive nature of some skin cancers, and their potential to cause significant morbidity and impact on quality of life, should be considered when determining the appropriateness of treatment.

Provision of oncogeriatric services is variable across cancer centres, although some trusts have established formal multidisciplinary models of care. Capacity constraints may limit the ability of geriatric services to undertake comprehensive geriatric assessment (CGA), as well as the ability of oncology teams to screen for CGA or address broader non-oncological needs. The RCR has consistently supported the use of validated geriatric assessment tools to inform treatment decision-making and provide structured frameworks for the delivery of care to older patients. Such tools may also assist in identifying and communicating the level of support required to enable patients to undergo treatment safely and effectively.

## Statement 1.6

Preservation of function and cosmesis should be key considerations when selecting radiotherapy modality and fractionation, particularly for lesions arising in anatomically and cosmetically sensitive sites such as the eyelid, nasal bridge and external ear. In these locations, radiotherapy may offer advantages over surgery in maintaining anatomical structure and functional outcome. Treatment selection should consider site-specific risks and anticipated toxicity.

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General principles

The RCR skin cancer consent guidance emphasises the importance of balancing the potential risks of radiotherapy – including pigmentary change, telangiectasia and ulceration – against the potentially greater morbidity, functional impairment or disfigurement associated with surgical intervention. In such scenarios, management decisions should be informed by MDT discussion.

Collaborative decision-making involving patients, clinical oncologists, dermatologists, plastic surgeons and other relevant specialist team members supports the selection of the most appropriate treatment approach, particularly for lesions located at functionally or cosmetically critical sites.

## Statement 1.7

Radiotherapy without a biopsy may be appropriate in older patients with clinically certain BCC where there is consensus between the referring and treating clinicians and supported by the MDT. The standard of care remains a diagnostic biopsy to guide treatment, as more aggressive cancers can sometimes resemble BCC.

## Statement 1.8

Radiotherapy to the upper and lower extremities, acral regions and outer upper eyelid is associated with poor wound healing, fibrosis and radiation necrosis. Despite this concern, a study in patients receiving radiotherapy to below-the-knee sites has shown a 17% incidence of grade 3 toxicity, with no grade 4 events, supporting its potential role in the management of lower limb skin cancers in individuals unsuitable for surgery.

## Statement 1.9

This statement was developed during the consensus meeting and reflects the strength of opinion expressed by the clinicians present. Census data demonstrated that approximately one third of centres reported either no specialist nurse support or support limited to the dermatology or surgical components of the patient pathway. Where oncology clinical nurse specialist provision was available, this was predominantly focused on melanoma, with limited access for patients with non-melanoma skin cancers, including those with rarer tumour types, who often receive minimal or non-specialist support.

Patients undergoing treatment for complex skin cancers may require radical radiotherapy and/or systemic anti-cancer therapy and may experience significant morbidity related to their disease and its treatment. The availability of appropriately trained specialist nursing support is therefore an important component of high-quality care for this patient group.

## Statement 1.10

The census identified lone working in six centres, and formal peer review was timetabled in only 39% of centres. Peer review provides an important mechanism for regional networking and professional support, particularly for lone practitioners and those earlier in their careers.

The consensus group strongly agreed that all aspects of oncological treatment, including superficial radiotherapy, can be complex and carry clinical risk and therefore require robust peer support arrangements. Regular, structured peer review is considered an essential component of safe and high-quality practice across all radiotherapy modalities.

01
General principles

# Topic 1 references

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# 02 Squamous cell carcinoma

## Topic 2 statements

| Statement | | Voting outcome |
|---|---|---|
| **Topic 2A: Management of primary and nodal SCC** | | |
| 2.1 | **Primary:** Consider primary radiotherapy as definitive treatment for biopsy-proven T1 and T2 cSCC, though surgery remains the gold standard for the majority of patients.<br>Radiotherapy should be considered if there are patient or tumour factors favouring radiotherapy such as patient choice, morbidity of treatment, functionality and cosmesis. This is especially important in sites such as the cutaneous or dry vermillion lip.* | 95% – very strongly supported |
| 2.2 | **Primary:** Do not routinely treat T4 keratinocyte cancers with primary radical radiotherapy. These patients should be managed with multi-modality treatment or systemic anti-cancer therapy where the patient is not suitable for surgery or the morbidity of treatment is unacceptable to the patient.* | 93% – very strongly supported |
| 2.3 | **Adjuvant:** Recommend adjuvant radiotherapy where there is an incompletely excised (pathological margin <1 mm or involved) cSCC and where further surgery to achieve margin clearance is not possible, or where the patient has declined further surgery, unless where MDT has agreed complete excision (eg where galea has been taken and is negative).* | 100% – unanimous support |
| 2.4 | **Adjuvant:** Consider adjuvant radiotherapy or entry into a suitable clinical trial in patients with completely excised high-risk or very high-risk cSCC as defined by BAD guidelines (or international equivalent).* | 100% – unanimous support |
| 2.5 | **Adjuvant:** Consider adjuvant radiotherapy for patients on immunosuppression, especially if additional high-risk features are present, on a case-by-case basis.* | 100% – unanimous support |
| 2.6 | **Adjuvant:** Consider adjuvant radiotherapy for all locally recurrent cSCC, where radiotherapy was not given at time of primary excision.* | 100% – unanimous support |
| 2.7 | **Nodal disease:** Offer adjuvant radiotherapy following nodal dissection, particularly where there are ≥2 positive nodes, extracapsular spread, an involved lymph node over 3 cm in size or a <1 mm margin on an involved nodal dissection. | 100% – unanimous support |

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Squamous cell carcinoma

| Statement | | Voting outcome |
|---|---|---|
| 2.8 | **Nodal disease:** Do not routinely offer elective nodal irradiation in high-risk node-negative cSCC. | 100% – unanimous support |
| 2.9 | **Nodal disease:** Do not routinely offer postoperative nodal irradiation to patients with single <3 cm nodal metastases without extracapsular spread. | 95% – very strongly supported |

*Other modalities may also be appropriate based on emerging clinical practice.

| Topic 2B: Management of advanced cSCC (acSCC) | | |
|---|---|---|
| 2.10 | Discuss all patients with acSCC within an MDT involving input from an oncologist with expertise in treating people with skin cancer. Where possible, joint consultations with surgeons, dermatologists and oncologists are the gold standard when advising patients with acSCC on their treatment options. | 100% – unanimous support |
| 2.11 | Consider systemic anti-cancer therapy for all suitably fit patients with acSCC, including those with immunocompromise or immunosuppression, after appropriate counselling and discussion with the treating (eg transplant) team, if risk or benefit favours treatment. | 100% – unanimous support |
| 2.12 | Consider radiotherapy or surgery for acSCC patients on immunotherapy for symptom management, control of oligoprogression or where disease has become radically treatable. | 98% – very strongly supported |

# Topic 2 explanatory notes

cSCC is a radiosensitive malignancy, and radiotherapy plays an important role in the management of both primary and nodal disease. Surgery remains the firstline treatment for most patients; however, surgical cure should be defined by the ability to achieve complete excision with clear margins, acceptable morbidity and a reasonable expectation of durable disease control.

Where the morbidity associated with surgery is likely to be significant, even if surgery is technically feasible, alternative management strategies should be considered and discussed within the MDT. This includes radiotherapy and, where appropriate, systemic therapy. Patients for whom surgery would result in substantial functional impairment or cosmetic deformity, or those with comorbidities that increase surgical risk, should be offered discussion of non-surgical treatment options.

The committee recognises that clinical practice may evolve over time as emerging evidence from ongoing and future clinical trials informs the role of additional treatment modalities, including in the adjuvant and neoadjuvant settings.

# 02

Squamous cell carcinoma

## Statement 2.1

Definitive primary radiotherapy is recognised in national and international guidelines as an effective curative option for selected patients with cSCC. Radiotherapy may be appropriate for patients who are not suitable candidates for surgery, where complete surgical excision is not achievable, or where surgery would be associated with unacceptable functional impairment or cosmetic morbidity. This is particularly relevant for cSCCs arising at anatomically sensitive facial sites such as the eyelid, nose and lip, as well as for larger lesions involving the ear, forehead or scalp.

Reported local control rates for NMSC treated with definitive radiotherapy are typically in the range of 90–95%. In a retrospective series of 180 patients with large (>3.5 cm) cSCC, two-year relapse-free survival rates were 94.8% for well-differentiated tumours, 88.9% for moderately differentiated tumours and 85.7% for poorly differentiated tumours. These data support the role of definitive radiotherapy as a potentially curative alternative to surgery in appropriately selected patients, particularly where surgical morbidity would be high.

The committee notes that much of the available evidence supporting definitive radiotherapy in cSCC is derived from retrospective series and that prospective comparative data remain limited. Treatment decisions should therefore be individualised and informed by MDT discussion, considering tumour characteristics, anatomical site, patient comorbidities and patient preferences.

## Statement 2.2

Definitive radiotherapy as a sole treatment modality for patients with T4 cSCC is associated with poor oncological outcomes. Where feasible, surgical resection followed by adjuvant radiotherapy remains the preferred management strategy, with consideration of emerging systemic therapies where appropriate.

In cases where surgery is not technically feasible, acceptable to the patient or would be associated with unacceptable functional impairment or cosmetic morbidity, systemic therapy – such as immunotherapy – should be considered as an alternative approach. Treatment decisions should be individualised and guided by MDT discussion, considering tumour extent, patient comorbidities and patient preferences.

## Statement 2.3

The role of PORT following complete excision of high-risk node-negative cSCC is currently being evaluated in the ongoing SCC-AFTER clinical trial. Until the results of this study are available, the benefit of adjuvant radiotherapy in this setting remains uncertain and should be considered on an individual basis within the MDT.

Resection margins of <1 mm may be considered adequate in selected circumstances, as determined by the MDT. This may include scalp tumours where excision extends to and includes the galea aponeurotica, which is considered to act as an anatomical barrier to tumour spread when clear. Decisions on margin adequacy should take into account tumour characteristics, anatomical site and overall risk profile.

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Squamous cell carcinoma

## Statement 2.4

There was considerable discussion on the use of different staging systems, including the Brigham and Women's Hospital (BWH) and BAD classifications. The BWH system assigns stage based on the presence of one or more high-risk features, including tumour diameter >2 cm, poor differentiation, perineural invasion involving nerves >0.1 mm in calibre and tumour invasion beyond the subcutaneous fat. Tumours with bone invasion are automatically classified as T3.

The BAD staging system incorporates similar tumour-related risk factors while also accounting for additional patient and disease characteristics, including tumour thickness, anatomical high-risk site, immunosuppression and margin status. The BAD criteria were considered the most appropriate framework for this document, as they offer greater granularity and flexibility, allow individualisation of risk assessment and can be updated over time as new evidence emerges.

## Statement 2.5

The committee considered immunocompromise – whether related to immunosuppressive therapy or an underlying haematological disorder – to represent an additional risk factor that should be considered when assessing the potential benefit of postoperative radiotherapy.

## Statement 2.6

This approach is supported by the American Society for Radiation Oncology (ASTRO) Clinical Practice Guideline. In a study by Strassen *et al*, patients with recurrent tumours treated with adjuvant radiotherapy demonstrated significantly improved outcomes, with a five-year recurrence-free survival of 78% compared with 30% in those who did not receive radiotherapy, and an overall survival benefit of 79% versus 46%, respectively.

## Statements 2.7–2.9

These statements are supported by European, National Comprehensive Cancer Network (NCCN) and BAD guidance.

## Statement 2.10

Advanced cSCC (acSCC) should be categorised into three broad clinical groups:

1. Distant metastatic
2. Regionally advanced
3. Locally advanced disease

**Distant metastatic** acSCC is defined as disease with metastases beyond the regional nodal basin.

**Regionally advanced** acSCC means patients presenting with multiple metastatic regional lymph nodes and clinical or radiological evidence of extracapsular spread.

**Locally advanced** acSCC includes patients with T4 tumours, characterised by extensive invasion into deep structures such as bone or muscle and/or the presence of transit metastases. This category also encompasses fungating tumours, clinical, pathological or radiological evidence of perineural spread, persistent disease following two or more local recurrences and tumours requiring complex surgical resection, for example due to anatomical location. Across all categories of acSCC, patients in whom surgical management would carry an unacceptable risk of morbidity should be included within these definitions.

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Given the often-rapid tumour growth associated with acSCC, prompt local and distant staging is required. As the majority of cSCCs arise in sun-exposed head and neck sites, staging should be tailored accordingly. Magnetic resonance imaging (MRI) of the neck with gadolinium contrast and contrast-enhanced computed tomography (CT) of the neck, chest, abdomen and pelvis, or alternatively whole-body fluorodeoxyglucose positron emission tomography-computed tomography (FDG PET-CT), should be considered.

From recognition of advanced cSCC, a target time frame of up to 62 days to initiation of definitive treatment should be aimed for, in line with cancer pathway standards. Discussion in a specialist skin MDT meeting for all patients with locally advanced disease is essential.

### Statement 2.11

Systemic therapy should be the firstline treatment for patients with acSCC when surgery and radiotherapy are not viable options. Systemic therapy should be the firstline treatment in those with distant metastatic disease.

### Statement 2.12

The committee and consensus group agreed that radiotherapy remains a key treatment modality for patients with acSCC. In the palliative setting, radiotherapy has an established role in symptom control and local disease management. In addition, for patients who achieve a good but incomplete response to initial treatment, reassessment within the MDT may allow consideration of further surgical or radiotherapeutic intervention as part of an adaptive management strategy.

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# 03 Merkel cell carcinoma, melanoma and rare tumours

## Topic 3 statements

| Statement | | Voting outcome |
|---|---|---|
| **Topic 3A: Merkel cell carcinoma** | | |
| 3.1 | Offer adjuvant radiotherapy to the primary site in resected stage 1 and stage 2 MCC. Consider omitting in patients with stage 1 disease treated with at least ≥1 cm-wide local excision plus negative sentinel lymph node biopsy (SLNB) plus no high-risk features (immunosuppression, head and neck site and lymphovascular invasion). | 100% – unanimous support |
| 3.2 | Offer adjuvant radiotherapy to the primary site and draining nodal basin for people with resected stage 3a or stage 3b MCC. Offer radiotherapy in preference to completion nodal dissection for sentinel lymph node-positive disease. | 97% – very strongly supported |
| 3.3 | Consider prophylactic nodal radiotherapy in high-risk stage 1 and stage 2 patients who do not undergo SLNB or when SLNB is considered less reliable, particularly for patients who are immunosuppressed. | 91% – very strongly supported |
| 3.4 | Consider adjuvant radiotherapy as an alternative to surgery for patients with incompletely resected disease where re-excision would be morbid. Consider radical radiotherapy for patients with stage 1 to stage 3 disease where surgery is not preferred due to patient factors such as patient choice, morbidity of treatment, functionality and cosmesis. | 97% – very strongly supported |
| **Topic 3B: Use of radiotherapy in lentigo maligna melanoma (LMM), primary and nodal melanoma** | | |
| 3.5 | Do not routinely offer radiotherapy for *in situ* or invasive cutaneous melanoma, but this can be considered where surgical resection is not possible or as adjuvant treatment following resection of desmoplastic melanoma. In both cases, doses should be more than 50 Gy in 2 Gy fractions or a hypofractionated equivalent. | 100% – unanimous support |
| 3.6 | Do not routinely offer adjuvant radiotherapy in node-positive cutaneous melanoma; systemic anti-cancer therapy should be considered for these patients. Reserve adjuvant radiotherapy for patients with high risk of nodal relapse in whom systemic anti-cancer therapy is contraindicated, declined or where disease has recurred locoregionally despite it. | 94% – very strongly supported |

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| Statement | | Voting outcome |
|---|---|---|
| **Topic 3C: Use of radiotherapy in oligoprogressive melanoma** | | |
| 3.7 | Consider hypofractionated radiotherapy (eg stereotactic, intensity-modulated radiation therapy (IMRT) or volumetric modulated arc therapy (VMAT) in oligoprogressive metastatic cutaneous melanoma on systemic anti-cancer therapy. | 91% – very strongly supported |
| 3.8 | Consider using radiotherapy concurrently with checkpoint inhibitor therapy for symptomatic disease, given an increased response rate in this context. Hypofractionated regimes are preferred to conventional fractionation. Caution should be exercised given emerging data on toxicity. | 76% – strongly supported |
| **Topic 3D: Rare tumours** | | |
| 3.9 | **Dermatofibrosarcoma protuberans (DFSP):** Recommend primary surgical management but consider adjuvant radiotherapy in the presence of high-risk factors (<1 mm or positive margins where re-excision is not possible, recurrent tumour, fibrosarcomatous transformation). | 100% – unanimous support |
| 3.10 | **Skin adnexal carcinomas** (sweat gland, sebaceous, follicular carcinomas): Recommend primary surgical management, but offer radiotherapy where surgery is not possible due to patient factors such as patient choice, morbidity of treatment, functionality and cosmesis and where systemic anti-cancer therapy has poor efficacy. Consider adjuvant radiotherapy where there are high-risk features (perineural invasion, invasion into fat or bone, lymphovascular spread, lymph node spread) and positive or close margins where further excision is not feasible. Consider radical radiotherapy for unresectable local recurrence. | 100% – unanimous support |

# Topic 3 explanatory notes

## Statement 3.1

MCC is an uncommon but highly aggressive cutaneous neuroendocrine malignancy and carries the highest five-year mortality rate among skin cancers, at approximately 30%. Among patients treated with curative intent, around 30% will develop locoregional recurrence and approximately 25% of patients present with stage 3 or stage 4 disease at diagnosis. Tumours arising in the head and neck, those demonstrating lymphovascular invasion and disease occurring in immunosuppressed patients are associated with an increased risk of progression.

Accurate staging at initial diagnosis is critical. Functional imaging with FDG PET-CT has demonstrated superior sensitivity for the detection of regional nodal and distant metastatic disease compared with conventional CT-based staging. In patients who are clinically and radiologically node-negative, SLNB is the preferred technique for detecting occult nodal disease and is supported by all national and international guidelines.

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MCC, melanoma, rare tumours

All international guidelines recommend PORT for MCC, as it is associated with significant improvements in locoregional control and overall survival compared with surgery alone. Evidence suggests that delays exceeding eight weeks between surgery and the commencement of PORT are associated with inferior locoregional control. Selected patients with stage 1 MCC and lower-risk primary tumours may derive less benefit from PORT, given high rates of local control following surgery alone.

It is strongly recommended that all patients with MCC are reviewed within a specialist skin MDT to ensure appropriate staging, treatment selection and coordination of care.

## Statement 3.2

The committee was clear that completion nodal dissection may hinder the timely delivery of definitive locoregional radiotherapy in some patients. This position is supported by the European Society for Medical Oncology (ESMO) and EURACAN clinical practice guidelines, which recognise radiotherapy as a key modality in regional disease control and highlight circumstances in which surgical approaches may compromise optimal locoregional treatment.

## Statement 3.3

SLNB is recommended in all current national and international guidelines. In situations where SLNB is not feasible or is considered unreliable, lymphatic mapping using technetium-based radiotracers and/or fluorescence-guided scintigraphy may be considered as an alternative approach to nodal assessment.

## Statement 3.4

In the UK, surgery with wide local excision and SLNB remains the standard firstline treatment for MCC. However, MCC is a radiosensitive tumour and in Australia radiotherapy is commonly employed as the primary treatment modality for stage 1 to stage 3 disease.

An increasing number of UK centres are adopting aspects of this approach, with both surgery and radiotherapy discussed as primary treatment options, particularly where joint surgical–oncology consultations are used to support shared decision-making with patients. Where radiotherapy is selected, dose, fractionation and treatment planning should follow current RCR dose and fractionation guidance.

## Statement 3.5

Lentigo maligna is typically a slowly progressive melanoma *in situ* with a low risk of progression to invasive disease. Surgical excision is almost always the preferred management strategy, allowing complete clearance of disease and histological assessment for occult microinvasion. In patients where complete surgical excision is not feasible (eg due to large lesions in anatomically sensitive facial sites) definitive radiotherapy represents an appropriate alternative to surgery.

Standard radiotherapy schedules for lentigo maligna typically deliver 50–56 Gy in 2 Gy fractions using superficial-energy radiation, treating to a depth of approximately 5 mm. Hypofractionated schedules (eg 45 Gy in 10 fractions) may be considered in selected cases where tumour size, anatomical location and patient factors permit. Where available, brachytherapy may also be considered, as may the use of low-energy electron beams in circumstances where superficial photons are not accessible.

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MCC, melanoma, rare tumours

Outcomes from large retrospective series support the effectiveness of radiotherapy in this setting. In one published cohort of 593 patients treated for lentigo maligna or early LMM using superficial-energy radiotherapy, complete clearance rates were reported as 83% for primary radiotherapy alone, 90% following partial excision and radiotherapy and 97% following wide local excision and postoperative radiotherapy.

In contrast, invasive cutaneous melanoma is optimally managed with surgical excision, with margin width guided by Breslow thickness. This approach is associated with local recurrence rates of less than 5%. Adjuvant radiotherapy may be considered in selected patients with positive surgical margins where further excision is not possible due to anatomical constraints or patient-related factors. Radiotherapy has demonstrated a role in improving local control for selected head and neck primary melanomas with close or positive margins, with reported five-year locoregional control rates at the primary site of up to 82% where re-excision was not feasible.

Adjuvant radiotherapy is not recommended solely on the basis of adverse pathological features such as pT4 disease, lymphovascular or perineural invasion or N1c disease, as adjuvant systemic therapy is generally considered the more appropriate treatment approach in these settings.

## Statement 3.6

For patients at high risk of regional recurrence following therapeutic lymph node dissection, adjuvant radiotherapy has been shown to significantly reduce the risk of nodal field relapse. However, this benefit has not translated into improvements in relapse-free survival or overall survival. The potential benefit in regional control must therefore be carefully balanced against the risk of treatment-related toxicity, particularly in anatomically sensitive regions such as the groin.

In the context of the increasing effectiveness of adjuvant systemic therapies for melanoma, the role of adjuvant radiotherapy in patients at high risk of both regional and distant relapse requires careful MDT evaluation and shared decision-making with patients.

The ANZMTG 01.02/TROG 02.01 trial randomised 250 patients with high-risk stage 3 melanoma, predominantly treated in Australia and New Zealand, to either adjuvant radiotherapy (48 Gy in 20 fractions) or observation following therapeutic nodal dissection. High-risk features were defined as extranodal extension, multiple involved nodes (any parotid involvement, ≥2 nodes in the neck or axilla or ≥3 nodes in the groin) or large nodal metastases (≥3 cm in the neck or ≥4 cm in the axilla or groin). At a median follow-up of six years, adjuvant radiotherapy was associated with a significant reduction in regional nodal relapse (21% versus 36%; hazard ratio [HR] 0.52, 95% CI 0.31–0.88). However, no statistically significant improvement was observed in relapse-free survival (HR 0.89, 95% CI 0.65–1.22) or overall survival (HR 1.27, 95% CI 0.89–1.79).

Based on these data, adjuvant radiotherapy may be considered for the purpose of improving nodal field control following therapeutic lymph node dissection in patients who are not eligible for adjuvant systemic therapy and who have one or more of the following high-risk features:

- Multiple involved lymph nodes (any parotid involvement, ≥2 nodes in the neck or axilla or ≥3 nodes in the groin)
- Extranodal extension
- Large, involved lymph nodes (≥3 cm in the neck; ≥4 cm in the axilla or groin)
- Positive surgical margins
- Regional recurrence despite prior surgery and adjuvant systemic therapy

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MCC, melanoma, rare tumours

Decisions on the use of adjuvant radiotherapy in this setting should be individualised and made within a specialist MDT, considering patient comorbidities, anticipated toxicity, likelihood of regional control benefit and patient preferences.

## Statement 3.7

With recent advances in targeted therapies and immunotherapy, systemic treatment is the preferred management approach for the majority of patients with stage 4 melanoma. These treatments have demonstrated significant improvements in disease control and survival and now form the cornerstone of management in most metastatic settings.

Radiotherapy continues to have an important role in the management of metastatic melanoma, particularly for symptom control and durable local disease control in selected sites. It is an effective palliative modality for patients with symptomatic metastases, including painful bone disease, spinal cord compression, brain metastases and soft-tissue lesions causing pain, bleeding or obstruction. Radiotherapy may be delivered alone or integrated alongside systemic therapy, guided by MDT discussion and individual patient circumstances.

## Statement 3.8

A Radiation Therapy Oncology Group (RTOG) study has reported overall response rates of approximately 60% for the treatment of soft-tissue and nodal melanoma metastases with radiotherapy. There is increasing evidence to support the use of radiotherapy as a consolidative strategy for sites of disease that have not achieved a major response to systemic therapy.

Radiotherapy may also have a synergistic effect when combined with immune checkpoint inhibitor therapy. In a retrospective series of 47 patients treated with radiotherapy and ipilimumab, fractionated radiotherapy was identified as a significant predictor of response on multivariable analysis. Prior to radiotherapy, the response rate of out-of-field index lesions to ipilimumab was 11%, increasing to 25% following radiotherapy delivered to a non-index lesion. Radiotherapy administered within five days of commencing ipilimumab was reported to be well tolerated.

Treatment responses have also been observed with the combination of radiotherapy and PD-1 inhibitors, including nivolumab and pembrolizumab, with reported response rates of up to 65%. In one study, responses in non-irradiated lesions were observed in 44–46% of patients receiving sequential radiotherapy and anti-PD-1 therapy, compared with 64% in those treated concurrently.

As durable remissions and prolonged survival are increasingly observed in patients with metastatic melanoma, careful consideration of the potential short- and long-term toxicities of combined-modality treatment is essential when planning therapeutic strategies. Decisions should be individualised and informed by MDT discussion, considering disease burden, treatment intent and patient preferences.

## Statement 3.9

DFSP is a locally aggressive tumour and represents approximately 18% of all cutaneous soft-tissue sarcomas, making it the most common subtype. Although metastatic spread is rare, with a reported ten-year disease-specific survival of around 99%, DFSP carries a significant risk of local recurrence, with reported rates ranging from 0% to 40% depending on treatment modality.

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MCC, melanoma, rare tumours

Evidence from retrospective series indicates that surgical excision margins of <2 cm and the presence of multifocal disease are strong predictors of local recurrence following surgery. In these circumstances, consideration should be given to PORT to improve local control.

Where PORT is indicated, conventional fractionation is recommended, typically delivering 2 Gy per fraction to a total dose in the range of 50–70 Gy, depending on risk factors and margin status. Clinical target volume delineation should consider the primary anatomical location of the tumour and the extent of the surgical scar, with margins of approximately 3–5 cm from the original lesion where feasible, adjusted according to surrounding organ-at-risk constraints.

## Statement 3.10

Skin adnexal carcinomas (SACs) are rare cutaneous malignancies arising from adnexal epithelial structures, including the follicular unit, sebaceous glands and eccrine or apocrine sweat glands. These tumours are often biologically aggressive and carry a risk of local recurrence. Achieving adequate surgical margins can be challenging due to their infiltrative growth patterns, and multiple surgical excisions may be required to achieve local control.

Although high-quality trial evidence is lacking, observational series and extrapolation from the management of cutaneous and head and neck SCC support the selective use of radiotherapy in SAC. Perineural invasion, particularly in head and neck primaries, is recognised as a key indication for consideration of PORT to improve local control.

Systemic anti-cancer therapy may also play a role in selected cases, including the use of novel targeted agents guided by next-generation sequencing, particularly in advanced or recurrent disease. Management decisions should be individualised and informed by specialist MDT discussion.

**Table 1: Summary of radiotherapy dose or fraction**

| Tumour type or histology | Primary (definitive) radiotherapy – typical indication and dose | Adjuvant radiotherapy – indications | Typical adjuvant dose | Target volume considerations |
|---|---|---|---|---|
| Skin adnexal carcinomas (SAC, general) | Unresectable disease or unsuitable for surgery; 64–70 Gy in 2 Gy fractions | Positive/close margins, PNI, LVI, recurrence | BED 60–66 Gy (R0/R1); up to 70 Gy (R2) | Individualised CTV based on tumour extent and surgical findings |
| Adenoid cystic carcinoma (ACC) | Preferred modality for unresectable disease; ≥70 Gy EQD2 | High-risk pathology or perineural spread | 60–66 Gy (R0/R1); up to 70 Gy (R2) | Small radial margins; extended coverage along perineural pathways (≈9 mm) |
| Microcystic adnexal carcinoma (MAC) | Occasionally definitive; 60–66 Gy | Commonly indicated due to infiltrative growth | 60–66 Gy | Wide CTV margins (3–5 cm) where anatomically feasible |
| Pilomatrix carcinoma | Selected unresectable cases; ≈60 Gy | High-risk features or recurrence | 60–66 Gy | MDT-guided; limited evidence |

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MCC, melanoma, rare tumours

| Tumour type or histology | Primary (definitive) radiotherapy – typical indication and dose | Adjuvant radiotherapy – indications | Typical adjuvant dose | Target volume considerations |
|---|---|---|---|---|
| Sebaceous carcinoma | Rarely primary | Positive/close margins, PNI, recurrence | 60–66 Gy | Typical CTV margin ~2 cm |
| Extramammary Paget disease | Selected non-surgical cases | Positive margins or recurrence | 60–66 Gy | CTV margins typically 2–5 cm |
| Aggressive eccrine or apocrine tumours (eg hidradenocarcinoma, porocarcinoma) | Unresectable disease; 64–70 Gy | High-risk histology ± nodal risk | BED 60–66 Gy; elective nodes 45–54 Gy (selected cases) | Low threshold for nodal consideration |
| Dermatofibrosarcoma protuberans (DFSP) | Rarely used; selected unresectable cases | Positive margins, recurrence, deep infiltration | 50–70 Gy in 2 Gy fractions | CTV based on scar and tumour bed with 3–5 cm margin |

LVI=lymphovascular invasion; PNI=perineural invasion; CTV=clinical target volume.

## Notes and evidence base

- Evidence levels:
  - Level C–D evidence based on retrospective series, case reports and expert consensus
  - No randomised controlled trials available due to rarity.
- Dose ranges reflect commonly reported practice in published series and align with RCR principles of balancing tumour control with late toxicity.
- Advanced planning techniques (IMRT/VMAT) are recommended to optimise target coverage and organ-at-risk sparing; proton therapy may be considered in selected anatomically challenging cases.
- Long-term surveillance is essential due to the risk of late local recurrence, particularly in tumours with perineural invasion or infiltrative growth patterns.

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# Acknowledgements

## Steering group

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Dr Clare Kane, Consultant Clinical Oncologist, Royal Free Hospitals Foundation Trust

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### Co-opted members

Mr Jonathan Pollock, Consultant Plastic Surgeon, Nottingham University Hospitals

Dr Stephen Keohane, Consultant Dermatologist, British Association of Dermatology representative

Dr Heather Shaw, Consultant Medical Oncologist, Mount Vernon Cancer Centre

Loretta Jones, Society and College of Radiographers representative

## The RCR consensus project team

Fionnuala Morrissey, Professional Standards Projects Officer

Stephanie James, Professional Standards Manager

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## Consensus participants

The following centres were represented at the virtual RCR skin cancer consensus meeting held on 25 November 2025.

Barts Health NHS Trust

Belfast Health and Social Care Trust

Betsi Cadwaladr University Health Board

Cambridge University Hospitals NHS Foundation Trust

Dorset County Hospital NHS Foundation Trust

East and North Hertfordshire NHS Trust

East Suffolk and North Essex NHS Foundation Trust

Gloucestershire Hospitals NHS Foundation Trust

Guy's and St Thomas' NHS Foundation Trust

Imperial College Healthcare NHS Trust

Lancashire Teaching Hospitals NHS Foundation Trust

Leeds Teaching Hospitals NHS Trust

Maidstone and Tunbridge Wells NHS Trust

NHS Grampian

NHS Greater Glasgow and Clyde

NHS Lothian

NHS Tayside

Norfolk and Norwich University Hospitals NHS Foundation Trust

North Middlesex University Hospital NHS Trust

North-West Anglia NHS Foundation Trust

Oxford University Hospitals NHS Foundation Trust

Portsmouth Hospitals University NHS Trust

Royal Berkshire NHS Foundation Trust

Royal Cornwall Hospitals NHS Trust

Royal Free London NHS Foundation Trust

Royal United Hospital Bath NHS Foundation Trust

Somerset NHS Foundation Trust

South Tees Hospital NHS Foundation Trust

The Christie NHS Foundation Trust

The Clatterbridge Cancer Centre NHS Foundation Trust

The Newcastle upon Tyne Hospitals NHS Foundation Trust

The Royal Marsden NHS Foundation Trust

The Royal Wolverhampton NHS Trust

Torbay and South Devon NHS Foundation Trust

University College London Hospitals NHS Trust

University Hospital Coventry & Warwickshire NHS Trust

University Hospital Southampton NHS Foundation Trust

University Hospitals Birmingham NHS Foundation Trust

University Hospitals Bristol and Weston NHS Foundation Trust

University Hospitals of Leicester NHS Trust

University Hospitals Plymouth NHS Trust

University Hospitals Sussex NHS Foundation Trust

Velindre University NHS Trust

Western Health and Social Care Trust

Worcestershire Acute Hospitals NHS Trust

The first draft of the consensus statements was circulated to all the UK cancer centres to discuss with their multidisciplinary skin cancer teams and to provide feedback. Feedback was received from 40 centres and incorporated into the draft voted on at the consensus meeting.

# Abbreviations

| | |
|---|---|
| acSCC | Advanced cutaneous squamous cell carcinoma |
| ASTRO | American Society for Radiation Oncology |
| BAD | British Association of Dermatologists |
| BCC | Basal cell carcinoma |
| CFS | Clinical Frailty Score |
| CGA | Comprehensive geriatric assessment |
| cSCC | Cutaneous squamous cell carcinoma |
| CTV | Clinical target volume |
| IMRT | Intensity-modulated radiotherapy |
| LMM | Lentigo maligna melanoma |
| LVI | Lymphovascular invasion |
| MCC | Merkel cell carcinoma |
| MDT | Multidisciplinary team |
| NICE | National Institute for Health and Care Excellence |
| PNI | Perineural invasion |
| PORT | Postoperative radiotherapy |
| RCR | The Royal College of Radiologists |
| SCC | Squamous cell carcinoma |
| SLNB | Sentinel lymph node biopsy |
| VMAT | Volumetric modulated arc therapy |

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