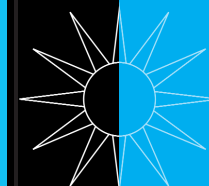


THE COLLEGE OF  
RADIOGRAPHERS



RADIOTHERAPY

**Positioning  
Therapeutic  
Radiographers within  
Cancer Services:**

**Delivering  
Patient-Centred  
Care**

THE SOCIETY OF  
RADIOGRAPHERS





RADIOTHERAPY  
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## Foreword

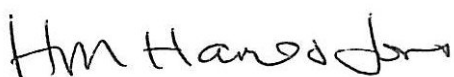
There is no doubt that cancer care within the United Kingdom has undergone considerable change and development over the past decade or so. Equally undoubted is the fact that more is needed. In the year 2000, the government stated that it was making cancer a priority and set out a comprehensive 10 year strategy to develop services such that cancer care in the UK would compare favourably with the best in the world<sup>1</sup>. Since then, reports have showed progress against the strategy.<sup>2,3</sup>

More recently, the NHS Cancer Plan and the *New NHS: Providing a patient-centred service*<sup>4</sup>, was published. In effect, this provides a stock-take and updates the strategy in the light of the changes that have taken place in the NHS since the NHS Cancer Plan was published in 2000.

The focus on providing patient-centred services fits well with the values of therapeutic radiographers. Indeed, this is evident in the College of Radiographers' publication of 2000, *A Strategy for the Education and Professional Development of Therapeutic Radiographers*<sup>5</sup>. This emphasises the need for care to be patient-centred, and expects therapeutic radiographers to work interprofessionally and flexibly, and to develop new roles to meet patients' needs.

Across the whole of the UK at present, considerable work is underway to determine the nature of cancer service provision in the future. This includes consideration of the changes that need to take place in the cancer workforce, and how to deliver effective prevention, diagnostics, treatment and continuing care in a NHS that is now radically different. There can be no doubt that continuing service modernisation, increased partnership working with independent service providers and voluntary organisations, different funding structures and budgetary constraints, will all bear heavily on the way cancer care is delivered by the end of the current decade.

It is timely, therefore, for the radiography profession and therapeutic radiographers to set out the nature of the contribution they can make. This document fulfils that intent and shows that, despite the serious and chronic shortages of therapeutic radiographers<sup>6</sup>, they are well placed to contribute to cancer care at all three levels of management identified in the person-centred model of care management outlined in the NHS cancer plan and the new *NHS: Providing a patient-centred service*.



**Hazel Harries-Jones**  
**President**  
**The Society and College of Radiographers**

<sup>1</sup> The NHS Cancer Plan: a plan for investment, a plan for reform (2000); The Department of Health

<sup>2</sup> The NHS Cancer Plan: making progress (2001); Department of Health

<sup>3</sup> The NHS Cancer Plan: Three year progress report – Maintaining the momentum (2003); Department of Health

<sup>4</sup> The NHS Cancer Plan and the new NHS: Providing a patient-centred service (2004); Department of Health

<sup>5</sup> A Strategy for the Education and Professional Development of Therapeutic Radiographers (2000); College of Radiographers

<sup>6</sup> Radiographic Staffing: Short Term Guidance; 2005 Benchmark for Standard Core Functions within Radiotherapy (2005); The College of Radiographers

## 1.0 Introduction

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1.1 Therapeutic radiographers have always been at the forefront in delivering cancer care, developing both educationally and in practice to meet ever evolving challenges in cancer care delivery. Building on a range of initiatives during the past decade, including:

- *Therapeutic Radiography: A vision for the future*, 1997<sup>7</sup>;
- *The Practice and Process of Therapeutic Radiography*, 1999<sup>8</sup>;
- *A Strategy for the Education and Professional Development of Therapeutic Radiographers*, 2000<sup>9</sup>;
- *The Scope of Practice*, 2003<sup>10</sup>;
- *Education and Professional Development: Moving Ahead*, 2003<sup>11</sup>;
- *Radiographic Staffing: Short Term Guidance; 2005 Benchmark for Standard Core Functions within Radiotherapy*, 2005<sup>12</sup>.

This document sets out how therapeutic radiographers will contribute to delivering patient-centred cancer services. It sets out models of service delivery that use the skills of therapeutic radiographers more fully and improve the patient experience across the whole pathway. Many of these roles already exist.

<sup>7</sup> *Therapeutic Radiography: A Vision for the Future* (1997); The College of Radiographers

<sup>8</sup> *The Practice and Process of Therapeutic Radiography* (1999); The College of Radiographers

<sup>9</sup> *A Strategy for the Education and Professional Development of Therapeutic Radiographers* (2000); The College of Radiographers

<sup>10</sup> *The Scope of Practice 2003* (2003); The College of Radiographers

<sup>11</sup> *Education and Professional Development: Moving Ahead* (2003); The College of Radiographers

<sup>12</sup> The College of Radiographers. *Radiographic Staffing: Short Term Guidance; 2005 Benchmark for Standard Core Functions within Radiotherapy* (2005); The College of Radiographers

## 2.0 Context

The context for setting out the position of therapeutic radiographers within cancer services is drawn from a number of influences, set out below.

### 2.1 Integrated Cancer Care

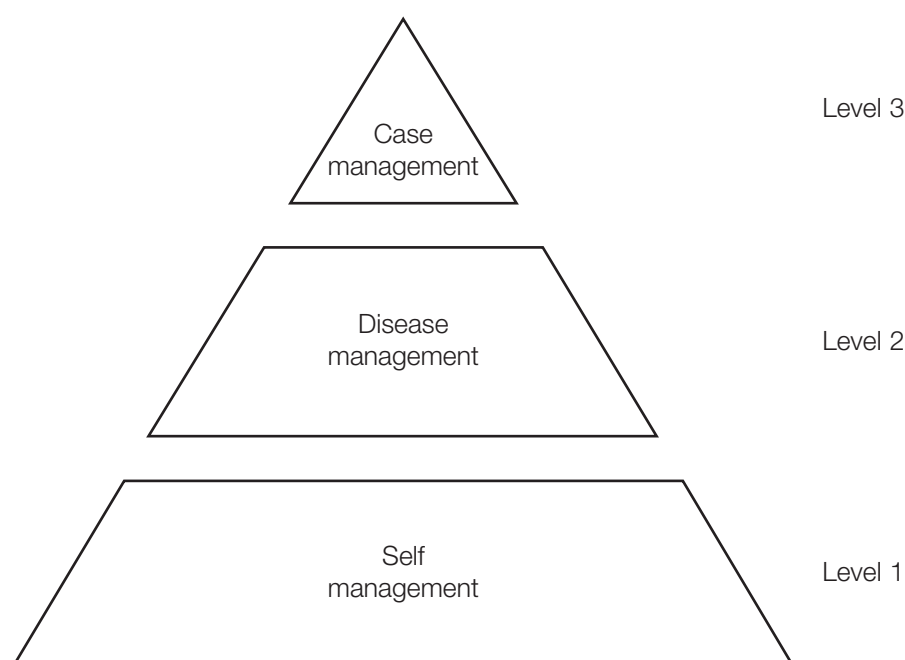
Delivering a personalised service for people with cancer is a major driver in cancer service developments.

Individualised care will be planned and managed in the community with the active participation of patients<sup>13</sup>.

A person-centred model of care management with three levels is proposed; self-management, disease management and case management (Figure 1).

**Figure 1: The right services for patients<sup>14</sup>**

(Reproduced from The NHS Cancer Plan and The New NHS: Providing a patient-centred service, DH 2004).



- Level 1 To facilitate self-management, patients require timely and appropriate guidance and support around the diagnosis and treatment options.
- Level 2 At the disease management level, decisions are made by a site specific multi-disciplinary team (MDT), comprising all key members of the cancer team, about the optimum treatment options to offer to a particular patient.
- Level 3 An expert practitioner from the MDT will ensure that these options are explained to the patient, referring back to the MDT as appropriate. They will be responsible for and co-ordinate care across the radiotherapy pathway, managing the entire treatment process.

The transition points between primary, secondary and tertiary care, including radiotherapy, are recognised as impeding continuity and are particular areas of concern.

<sup>13</sup> Supporting People with Long Term Conditions (2004); Department of Health

<sup>14</sup> The NHS Cancer Plan and the New NHS: Providing a patient centred service (2004); Department of Health

## 2.2 Organisational structures

In England, the local cancer network is the system within which cancer services are delivered, commissioned by primary care trusts, or their future equivalent.

The National Institute for Health and Clinical Excellence<sup>15</sup> proposes that networks develop their supporting care strategies based on the national model and address information and communication, symptom management, psychological, social and spiritual support.

The MDT is the main stay for ensuring co-ordination of person-centred care.

The career progression framework (the 'four-tier' structure)<sup>16</sup> is now embedded in radiographers' career development pathways. The high level skills of radiotherapy service managers are essential to ensure successful implementation, review and refinement of this framework in the clinical setting, to meet changing service needs<sup>17</sup>.

## 2.3 National Radiotherapy Strategy

The goal of the National Radiotherapy Advisory Group of the Department of Health (England) (DH NRAG) is to provide recommendations that should enable a world-class radiotherapy service to be delivered. DH NRAG is developing a model which will help cancer networks calculate their service requirements in terms of capacity and quality and which can be tailored for their specific population needs<sup>18</sup>.

It is likely that an overall increase in capacity of 50 per cent will be required to address patient needs: 25 per cent immediately and 25 per cent over the next 5-10 years.

Whilst the focus is around ensuring that there are key recommendations relating to equipment capacity, importantly, the group will also focus upon how the service can be delivered optimally to meet the holistic needs of cancer patients. As a consequence, DH NRAG has consulted with patients and patient groups.

## 2.4 Radiotherapy patient pathway

A recent report, *What breast cancer patients want from a world class radiotherapy service*<sup>19</sup> emphasised the need for "more patient centred, holistic care across the radiotherapy service".

DH NRAG commissioned work to identify the elements of the radiotherapy pathway for patients, the processes and the skills required to deliver each aspect.

DH NRAG identified the pathway for prostate cancer. Existing occupational standards for this pathway were identified, refined and tested. Educational packages were identified to support these standards. This has now been mapped across to the other main clinical sites for cancer.

Guidance is due to be approved by DH NRAG that will include further changes to skills mix, when supported by appropriate education and training. This helps meet local service need and strives to centre care on the patient.<sup>20</sup>

This guidance supports the requirement for the profession to deliver integrated cancer care by extending the roles of therapeutic radiographers beyond those related to radiotherapy equipment alone, and to a model offering opportunity for roles related to case mix and liaison into the community.

<sup>15</sup> NICE Guidance on Supportive and Palliative Care (2004); Department of Health

<sup>16</sup> A Curriculum Framework for Radiography (2003); The College of Radiographers

<sup>17</sup> Implementing Radiography Career Progression: Guidance for Managers (2005); The College of Radiographers

<sup>18</sup> DH NRAG report (2005); Department of Health

<sup>19</sup> Breast Cancer Care and Breakthrough Breast Cancer. What Breast Cancer Patients Want From a World Class Radiotherapy Service; report presented to DH NRAG April 2005. Department of Health

<sup>20</sup> NRAG subgroup report; radiotherapy patient pathway (2005); Department of Health

## 2.5 New models of care and delivery

If we are to meet the goal of a UK wide and world-class service for patients, the Society and College of Radiographers recognises that radiographers must adapt and relate to the environment in which they currently work, and in which they will be working in the future. One way to achieve this is to describe new models relating to the patient pathway and offer site-specific services for patients.

Whilst there remains a need for highly specialised technical radiographers, both in pre-treatment and treatment delivery, to ensure accurate delivery of radiotherapy, a new model of care related to case management is required. This has been clearly articulated by patients and specified within the *NHS Cancer Plan* and the *New NHS*<sup>21</sup>. This will require staffing models fully utilising all the four tiers of the career progression framework, thus ensuring the service remains efficient whilst operating cost effectively; for example, radiographer led planning ensuring the simulator remains clinical when medical clinicians are on leave, or radiographers reviewing patients and undertaking supplementary prescribing and/or supply and administration of drugs under patient group directions.

## 2.6 The role of the expert practitioner within a service delivery model

In essence, the expert practitioner will act as the conduit between the *Disease Management Level* of the multidisciplinary team (disease site specific MDT) and the radiotherapy multi professional team (clinical oncologists, medical physicists, pre-treatment and treatment delivery radiographer teams, and other associated healthcare professionals such as dieticians and nurses).

This practitioner forms an important and integral part in the Case Management Level providing an expert service for individual patients, ensuring well co-ordinated continuity of care through the patient's active treatment period. The role will also inform and support patients in the *Self Management Level* of the patient centred care model.

<sup>21</sup> The NHS Cancer Plan and the New NHS: Providing a patient centred service (2004); Department of Health

### 3.0 The three models of radiographer led expert practice: Consultant and/or advanced practitioner roles. (Illustrated by Figure 2 on page 12)

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#### 3.1 Site-specific expert practice practitioner

It is anticipated that this practitioner will support the patient across the radiotherapy pathway, providing co-ordination of care for a selected group of patients. This will be either by case mix, related to a specific disease site such as gynaecological cancer, or could be a specific group of patients such as those receiving palliative radiotherapy. They will be experts within their field, working within the MDT, providing seamless care pathways for specified groups of patients.

This expert practitioner will be a key member of the MDT with high-level skills and knowledge related to, for example, a particular disease site.

##### Decision making at MDT level includes:

- Advising on patient suitability for radiotherapy (within protocol);
- Involvement in research and trials;
- Working within the Cancer Network as the expert therapeutic radiographer practitioner;
- Initiating the radiotherapy referral.

##### Decision making within the radiotherapy team related to the practitioners specific area of expert practice. This will include:

- Providing a radiographer led service for pre-determined groups of patients; for example, gynaecological patients, palliative care patients, patients for radical prostate treatment;
- Directing the patient pathway from referral to post radiotherapy and long term follow up;
- Providing information and support for a pre-determined group of patients across the pathway;
- Obtaining informed consent;
- Establishing links between the pre-treatment and treatment delivery radiography teams;
- Involvement in pre-treatment planning for complex cases as required;
- Authorisation of the treatment prescription (within protocol);
- Supervising specialist treatment delivery; for example, gynaecological treatments utilising brachytherapy equipment;
- Treatment verification and portal image assessment and associated decision making related to practitioners' areas of expert practice;
- Radiotherapy review and assessment related to practitioners' areas of expert practice (disease site), including toxicity management, pharmacological intervention, and follow-up;
- Leading in research and development within their given fields.

#### 3.2 Technical specialist expert practitioner

Whilst therapeutic radiography practitioners, with support from assistant practitioners, will continue to undertake the majority of the planning and delivery of radiotherapy treatments, there is a requirement for identification of expert technical practitioners in pre-treatment and treatment delivery.

This expert practitioner will have a crucial role in leading the technical aspects of radiotherapy delivery, either pre-treatment or treatment delivery, or both, and will work across, and be available for consultation by, the radiographer, medical and physics teams. This technical expert will interface with the site-specific experts regarding specific technical pre-treatment and treatment options as required.

This individual will be a key member of the wider radiotherapy multiprofessional team, with higher level knowledge and skills in the practice of radiotherapy, its scientific, technical and radiobiological foundations including delivery and planning systems, imaging modalities, fractionation regimes, set-up inaccuracies, organ motion and its effects. It is

anticipated that this expert practitioner will be involved in research and development and its implementation into practice, together with an appreciation of future directions and developments in radiotherapy.

At service provider and Cancer Network levels this individual will advise on the purchase of new equipment during planning and procurement

**The expert technical practitioner will undertake:**

- Decision making relating to all aspects of pre-treatment and/or treatment delivery;
- Advising on the suitability of both imaging modalities and radiation delivery techniques;
- Problem solving and decision making for individual patient cases, often in liaison with the site-specific practitioner;
- A staff training and development role related to competencies;
- Quality assurance systems and incident reporting and action;
- Involvement in radiotherapy technique research and development; for example in patient positioning and immobilisation, imaging systems, new systems of delivery including equipment, radiobiological systems and joint modalities such as chemo radiation.

### 3.3 Community liaison expert practitioner

This expert will provide continuity of care between the primary, secondary and tertiary cancer sectors, providing information and support to both the patient and the primary sector about the practice of radiotherapy and management of associated early and late effects.

Responsibilities include those for liaison, education and support regarding radiotherapy for patients, carers, and staff within the Cancer Network including primary care trusts, general practitioners, MDTs, and oncology clinics. Co-ordination and supply of information on radiotherapy will also be part of the responsibilities. The majority of this role will be undertaken within the community, normally with a base at a cancer centre.

**The expert community liaison practitioner will undertake:**

- Liaison with the teams and individuals involved in the disease management and case management levels;
- Information and support to patients waiting for radiotherapy, and those post radiotherapy;
- Advice to primary care teams regarding the management of side effects;
- Liaison with palliative care teams;

### 3.4 Conclusion

The three models of radiographer led expert practice laid out above provide a framework within which to develop specific roles to support the delivery of patient-centred cancer services. They also show the extensive contribution that some therapeutic radiographers already make to cancer care, as well as the potential to grow significantly. Additionally, implementing these models of practice on a widespread basis, provides a diversity of career progression for therapeutic radiographers.

Implementing the models will require further, targeted investment in postgraduate education and training to support practice at these higher levels.

## 4.0 Summary

Using expert therapeutic radiographers differently and to a much greater extent within the cancer care service, will enable more pro-active management of the patient pathway. It will enable timely referrals from primary to secondary and secondary to tertiary care. It has the potential to streamline the patient journey, to cut out duplication and to enhance timely decision making, so reducing non-value added time for patients. Overall, it makes more efficient and effective use of highly-skilled professionals and re-focuses the radiotherapy service around patients' needs.

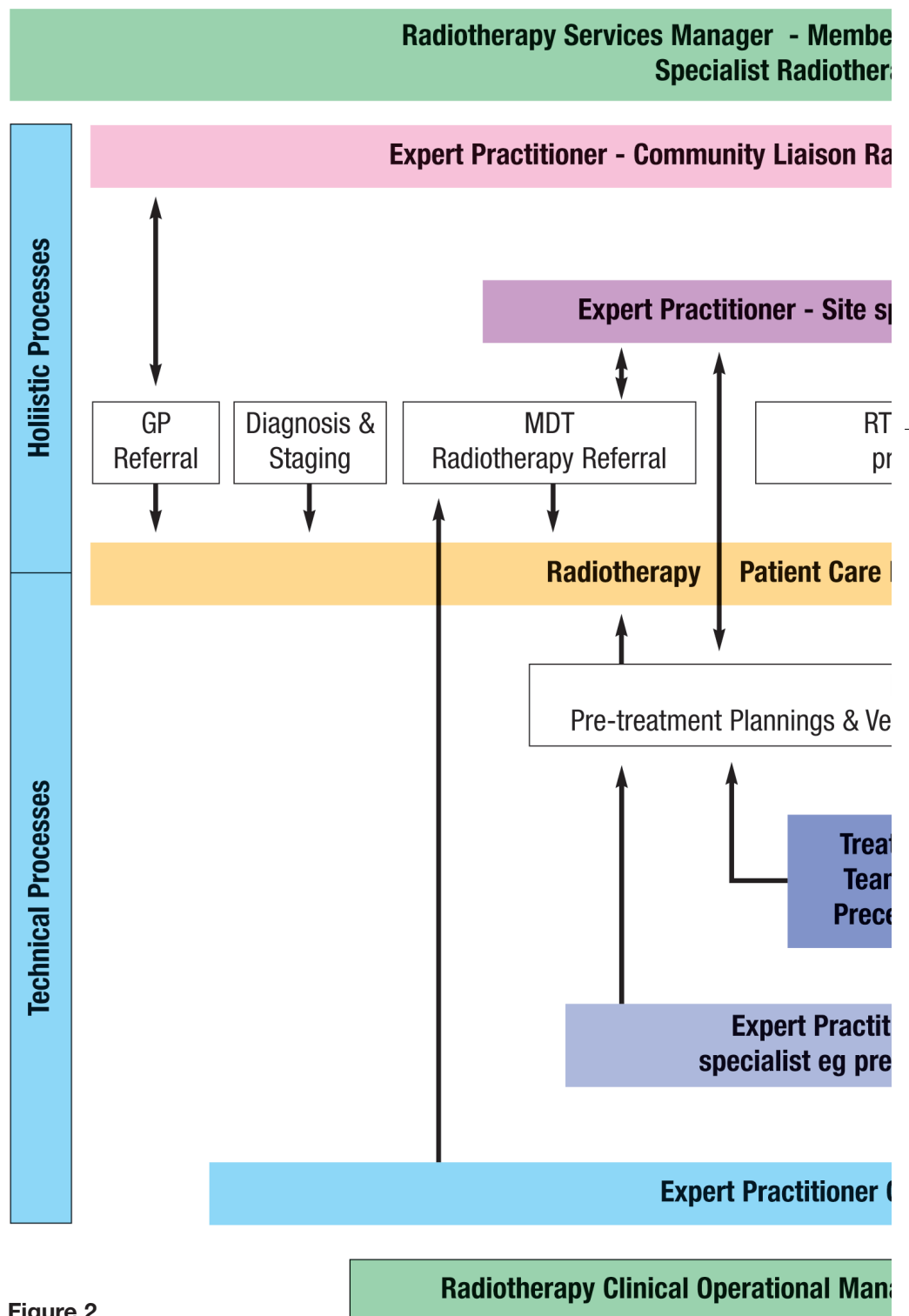


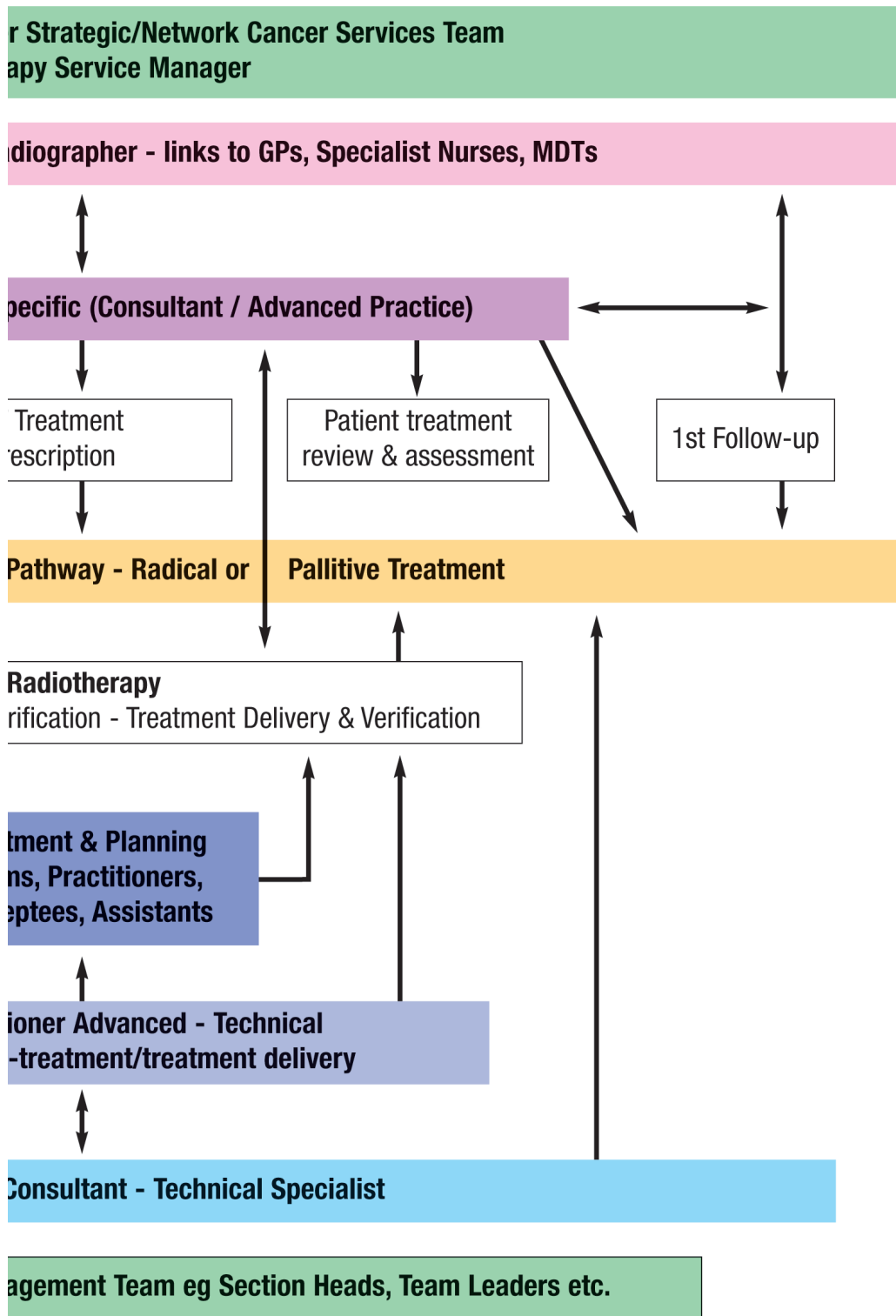
Figure 2

**Figure 2:**

Diagram demonstrating the three models of radiographer led expert practice (consultant and/or advanced practitioners) and their place in the cancer care pathway:

**Key to diagram:**

- 1. Site-specific expert practitioner
- 2. Technical specialist expert practitioner
- 3. Community liaison expert practitioner



## **Bibliography** - Useful resources for implementing the three models of radiographer led expert practice

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In addition to the references given as foot notes, the following offer further reading and information on skills mix, changing roles and service re-design, patient centred approaches to care and changing technologies and potential impact to the service.

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## Acknowledgements

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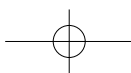
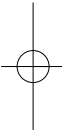
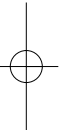
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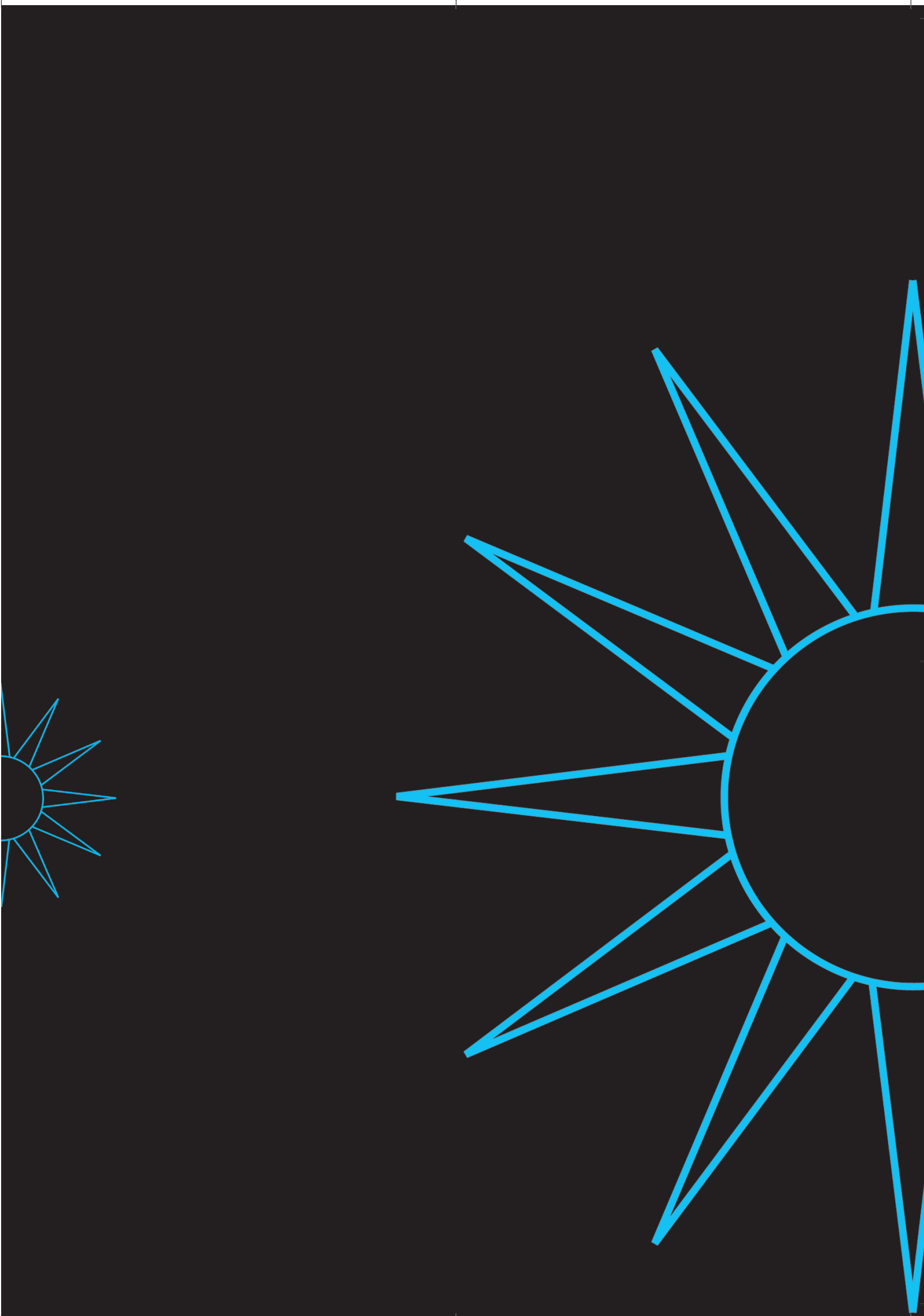
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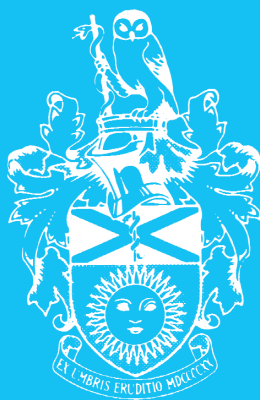
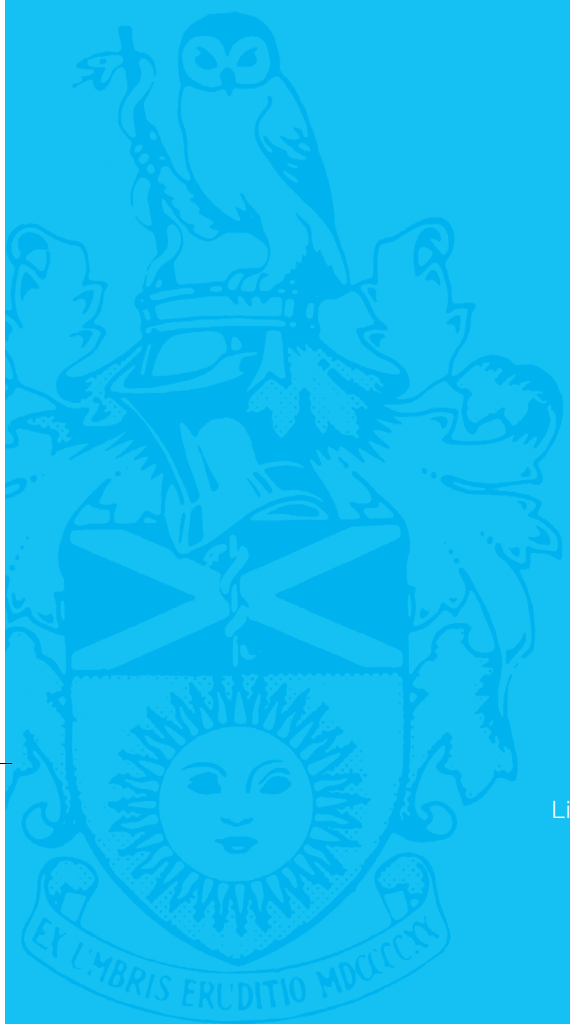
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