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Clinical Radiology
The Royal College of Radiologists

Recommendations for cross-sectional imaging in cancer management, Third edition

Preface

April 2022

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Between 2016-2018, around 1,000 people a day were diagnosed with cancer in the UK.[1] Significant improvements in survival have been achieved as prevention, diagnosis and treatment have improved. In the 1970s, less than a quarter (23%) of cancer patients survived for 10 years. By 2010-11, that was closer to 50%.[1]

As a result, there has been a considerable increase in the number of patients living with cancer, currently estimated to be more than three million in the UK.[2]

Despite recent improvements in cancer care, survival rates in the UK lag behind other countries for certain cancers. Increasing demands on cancer diagnostics and late diagnosis are seen as key reasons for this.[3] In 2019, the NHS Long Term Plan was published with ambitions that by 2028, 75% of people with cancer will be diagnosed at an early stage (stage 1 or 2).[4] It is now clearly established that imaging is central to the management of patients with cancer throughout the patient pathway and will play a key role in supporting this target.

There is still a need to provide guidelines and protocols for computed tomography (CT) and magnetic resonance imaging (MRI) in cancer, with the objective of helping to achieve a high-quality, efficient and uniform cancer imaging service across the UK. A major advantage of adopting UK-wide protocols is the ability to provide a streamlined effective service in which appropriate scans are undertaken according to the patient's tumour type and purpose of the examination. These protocols will also ensure that imaging studies can be compared more accurately during follow-up in an individual patient, irrespective of where the patient has been imaged. This is particularly important for reducing the need to repeat imaging of patients being entered into clinical trials and also with the advent of imaging networks where scans may be read in varying locations.

CT and MRI are used at all stages of the patient pathway: diagnosis, staging, determining the appropriate therapy, including eligibility to enter into clinical trials, and during follow-up. They are used for the assessment of residual disease and for determining the presence and extent of tumour relapse. These key roles were recognised by previous editions of this manual, but guidelines and protocols need to be continually appraised and updated to keep abreast of technological advances and new therapeutic approaches so that optimum results can be achieved.

CT, MRI and PET are covered within these guidelines, reflecting the current clinical practice of using these complementary techniques. At different points along the patient pathway one or the other may be more appropriately used depending upon whether treatment intent is curative or palliative, and whether the imaging focus is for local or metastatic disease. These guidelines do not include ultrasound, although it is acknowledged that this imaging modality can play a significant role in cancer management.

These guidelines are intended to provide practical advice and recommendations for best practice which should be achievable for the majority of patients. However, they are not intended to be prescriptive and could be adapted readily to meet local requirements.

We have not included information on image interpretation which can be found in textbooks, journals and internet resources. We have tried to follow as closely as possible a standardised page layout, including reference to the TNM classification of tumours, where appropriate.

The Royal College of Radiologists has utilised the input of its affiliated Special Interest Groups[5] and nationally and internationally recognised radiologists with particular expertise in cancer imaging to produce these recommendations. I would like to thank all those who have contributed to the document for their hard work and dedication.

We hope that these protocols will be used widely within departments of radiology undertaking cancer imaging and will help to improve cancer services across the UK.

The guidelines are being published as individual chapters and over the coming months more chapters will be made available as they are published.

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References

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