

Bridging the Gap: Implementing the 2024 National Cancer Control Programme (NCCP) Melanoma Imaging Guidelines in Real-World Practice

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Abstract

Malignant Melanoma is the fourth most common cancer in Ireland, known for rapid progression and metastasis. Targeted immunotherapy has significantly improved 5-year survival. In May 2024, the National Cancer Control Programme issued guidelines for radiological staging and surveillance, helping clinicians in determining the appropriate radiological modality and timeline for staging and surveillance. This audit revealed gaps in follow-up imaging due to organizational constraints and health service pressures. Compliance with staging imaging was high at 92% (11/12), improving to 100% (12/12) following re-audit. In contrast, compliance with surveillance imaging was lower, with 55% (6/11) for PET-CT and 27% (3/11) for MRI/CT brain, improving to 87.5% (7/8) and 50% (4/8), respectively, in the second cycle. Continued audit and multidisciplinary education are vital for consistent, guideline-based melanoma follow-up.

Introduction

Malignant Melanoma is the fourth most common cancer in Ireland and the number of people being diagnosed with melanoma has tripled in the last 20 years¹. With the advent of targeted immunotherapy, there has been a significant increase in the 5-year survival of metastatic melanoma patients^{2, 3}. Therefore, although melanoma incidence continues to rise, median survival has increased from about 6 months to nearly 6 years for patients with advanced, inoperable stage IV disease². In May 2024, the National Cancer Control Programme (NCCP) published updated national guidance *Radiological Staging and Surveillance of Patients with Cutaneous Melanoma*⁴ which outlines recommended staging investigations and introduces

expanded surveillance imaging for patients with Stage IIB–IV disease³. These guidelines recommend a substantial increase in PET-CT and MRI brain utilisation and have important implications for radiology capacity, Multi-Disciplinary Team (MDT) work flow and service planning across the Irish healthcare system.

Translating clinical guidance into routine practice rarely happens immediately after publication of new guidelines. This implementation gap is well recognised, particularly when guidance is complex or resource-intensive⁵. Early evaluation of how new recommendations are adopted is essential to understand how our healthcare system can adapt, identifying operational barriers and to ensure equitable care for melanoma patients.

Our paper reflects on our centre's experience in implementing new national guidelines in the year following publication from the NCCP. Drawing on findings from a two-cycle audit of staging and surveillance imaging, we describe the challenges, areas for improvement, and persistent gaps in compliance, and explore broader organisational and system-level considerations relevant to melanoma services nationally.

Methods

We conducted a clinical audit evaluating adherence to the NCCP 2024 guideline *Radiological Staging and Surveillance of Patients with Cutaneous Melanoma*. We examined radiological imaging practices for patients with newly diagnosed stage IIB – IV melanoma managed in our tertiary centre from May 2024 to March 2025. Results from the first audit cycle were presented to our MDT stakeholders, and education on the new guidelines was provided prior to conducting the second cycle of the audit.

Data were collected from our Skin Cancer Clinical Nurse Specialist database, our online hospital patient management system (Patient Centre), and the National Integrated Medical Imaging System (NIMIS). For each patient, we recorded timing and completion of recommended staging investigations (PET-CT and brain MRI) and surveillance imaging where applicable. Compliance was defined as completion of the guideline-recommended modality within the expected follow-up interval. Time from clinical diagnosis to imaging and from scan order to completion was also captured.

We surveyed all MDT stakeholders to identify the primary impediments to implementing national guidelines.

Data were analysed descriptively and presented as mean intervals and proportions. This audit was registered with the hospital audit committee and conducted as part of routine quality-improvement activity.

Results

22 patients with stage IIB – IV melanoma were included across the two audit cycles (12 patients in the first cycle, and 10 in the second cycle). The average age of the patients in the first cycle was 74.5 years, and 73.2 years in the second cycle. Males comprised 75% of the cohort in the first cycle and 100% of the cohort in the second cycle.

Staging imaging

In the first cycle, the mean time from diagnosis to staging PET-CT was 80.4 days, improving to 61.4 days in the second cycle. Time from order to completion also decreased (36.7 to 25.2 days). A similar pattern was observed for brain MRI: the mean diagnosis-to-scan interval fell from 89.9 to 54.1 days, and order-to-completion time from 31.9 to 22.6 days. Compliance with NCCP staging recommendations increased from 92% to 100% following the dissemination of first-cycle findings at the MDT.

Surveillance imaging

In contrast to staging imaging, surveillance imaging showed lower adherence to guidelines. In the first cycle, 55% of eligible patients underwent surveillance PET-CT and 27% underwent MRI/CT brain. These increased to 87.5% and 50%, respectively, in the second cycle. Despite improvement, surveillance imaging remained below optimal compliance levels.

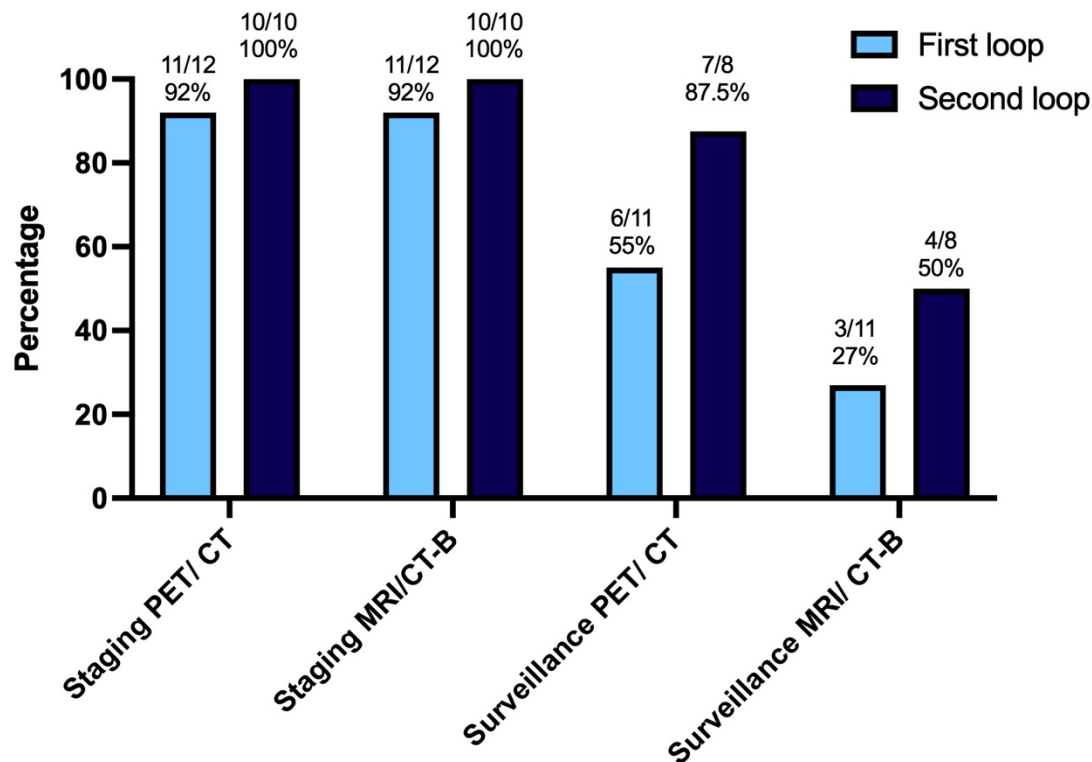


Fig 1: Comparison from first loop vs second loop audit results on compliance to NCCP guidelines

Survey

When asked what improvements might help streamline our melanoma imaging pathway, responses included education of clinicians and protected radiology scan slots. When asked what the main challenges are in implementing the NCCP guidelines for radiological staging and surveillance, responses included a lack of knowledge of requirements/ guidelines, a lack of coordinator input regarding timing and access to radiology resources.

Discussion

Our findings illustrate the practical challenges that accompany the introduction of new national guidelines for melanoma imaging. The NCCP 2024 guideline offers clear staging and surveillance recommendations, but its release coincided with an immediate increase in demand for PET-CT and brain MRI. In the first audit cycle, prolonged waiting times and incomplete compliance reflected a service still adjusting to these requirements. This pattern is consistent with the well-described implementation gap between guideline publication and real-world practice, particularly where recommendations require new resources or operational change⁵.

The improvements observed in the second cycle demonstrate the value of clinical audit as a driver of behavioural and systems-level change. Following multidisciplinary feedback and focused education on the national guidelines, compliance with staging recommendations reached 100%, and waiting times for both PET-CT and MRI improved. This supports existing evidence that targeted educational interventions and local feedback loops can strengthen guideline uptake when changes to workflow are relatively modest⁶.

Persistent gaps in surveillance compliance

While we have seen improvements in surveillance imaging, there are still areas for improvement before achieving 100% compliance. Our experience reflects the national context. It has been reported that by March 2025, over 300,000 patients in Ireland were awaiting radiological investigations, with 15% waiting over 18 months⁷. PET-CT and MRI slots are shared across multiple specialities, and routine surveillance requests compete poorly with urgent and time-sensitive diagnostics. Recent Irish modelling estimated that full implementation of the NCCP guidance would generate substantial additional workload, including an extra 110 whole-body CTs, costing €176,000 per year for PET-CT with an additional 55 hours of reporting time required. For compliance with MRI imaging, this would mean an increase of 39 additional brain MRIs per year, at a cost of €140,000 and a further 195 hours of reporting time required⁸. Our findings closely align with these projections.

Patient factors also influence surveillance decisions, as some may opt out of surveillance due to age or other serious co-morbidities, which can diminish the priority of melanoma monitoring, or due to work commitments, travel needed to get to appointments, a lack of trust in the hospital system, limited time because of other hospital visits⁹.

Operational and human-factors barriers

Stakeholder feedback identified lack of familiarity with the guideline and limited access to radiology slots as key barriers. However, issues within the MDT process also play a role. Staging is not always explicitly documented in the MDT proforma, creating uncertainty for clinicians scheduling post-treatment surveillance. This reflects wider challenges: radiology and pathology staff spend nearly 20% of their time preparing for or participating in MDTs¹⁰, and errors in documentation can arise from cognitive load, interruptions, and other human-factor contributors¹¹. Administrative workload, often carried by junior staff, may further compromise accuracy and consistency¹². Ensuring that clinical stage is clearly discussed and recorded for every patient would help standardise the surveillance pathway.

Role of the Clinical Nurse Specialist

Our experience underscores the importance of the Skin Cancer Clinical Nurse Specialist (CNS) in coordinating surveillance imaging, supporting patient communication, and maintaining accurate records. CNS-led navigation has been shown to improve cancer service delivery and patient experience¹³, and in our centre, a CNS-supported model may help mitigate administrative fragmentation and enhance compliance.

Comparative Practice Across Irish Centres

These findings are unlikely to be unique to our institution. A broader Irish multi-centre audit, or a national evaluation coordinated through the NCCP, could help identify regional variability in access to PET-CT and brain MRI for surveillance. Such an initiative would provide valuable insight into differences in resource availability, referral pathways and adherence to guideline-recommended imaging practices across healthcare regions and can help inform more standardised national surveillance strategies.

Conclusion

This audit demonstrated improved compliance with melanoma staging recommendations, following targeted MDT education, with shortened intervals from scan ordering to completion in the second cycle. Surveillance imaging, although improved, still requires improving and this reflects the organisational constraints and wider health service pressures. Strengthening documentation of clinical staging at MDT, expanding CNS-led coordination, and securing protected radiology capacity may help optimise surveillance pathways. Ongoing audit and multidisciplinary education will be essential to support consistent, guideline-aligned melanoma follow-up.

Declarations of Conflicts of Interest:

None declared.

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