ORIGINAL ARTICLE

Melanoma histopathology reporting: are we complying with the National Minimum Dataset?

Manjit R Kaur, Peter S Colloby, Agustin Martin-Clavijo, Jerry R Marsden

J Clin Pathol 2007;60:1121–1123. doi: 10.1136/jcp.2006.042937

See end of article for authors' affiliations

Correspondence to:
Dr Manjit R Kaur, University
Hospital Birmingham
Foundation Trust, Selly Oak
Hospital, Raddlebarn Road,
Selly Oak B29 6JD, UK;
manjitkaur77@hotmail.com

Accepted 28 November
2006

Published Online First
20 December 2006

Background: The Royal College of Pathologists introduced the National Minimum Dataset (NMDS) for the histopathological reporting of cutaneous melanoma in February 2002.

Aim: To determine if histological reporting of invasive primary cutaneous melanoma in the West Midlands region of the UK was compliant with the NMDS.

Methods: Reports were identified from March 2002 to March 2003 via the regional Cancer Intelligence Unit, and compared with the NMDS. If all items of the NMDS were adhered to, the report was considered compliant. If not compliant, the report was checked to see if it included selected clinical and staging parameters.

Results: 543 cases of invasive cutaneous melanoma were identified, but only 407 reports were analysed. 69/407 (17%) (95% CI 14% to 20%) reports were fully compliant with the NMDS. Of the non-complaint reports, 45/361 (12%) (95% CI 9% to 16%) reported all staging and clinically relevant parameters; 62/361 (17%) (95% CI 59% to 65%) reported all staging parameters. Breslow thickness was reported in all but one of the reports (99.7%), Clark's level was reported in 344/407 (85%), ulceration in 280/407 (69%), and microsatellites in 146/407 (36%).

Conclusion: There was slow uptake of the NMDS in this region in the year following its introduction. Although major parameters required for staging were more consistently reported, ulceration and microsatellites were less frequently reported.

The Royal College of Pathologists published the National Minimum Dataset (NMDS) for the histopathological reporting of melanoma in February 2002.¹ This was written to be consistent with the "UK Guidelines for the Management of Cutaneous Melanoma",² and applies to both in-situ and invasive disease. The NMDS includes items that have direct prognostic value and so provide staging information; this may in turn determine eligibility for clinical trials. Its completeness is therefore an important aspect in determining accuracy of treatment planning. Although some of the information included might not be of immediate relevance in the management of a particular patient, its importance may become apparent later, especially when interpreted in conjunction with information from large numbers of patients during research. Certain histopathological parameters that may not be routinely reported are also required for use in mathematical models such as Cochran's model to determine prognosis.³ A need for consistent reporting of melanoma histopathology has also been highlighted in previous audits.⁴

Demand for histopathological diagnosis of pigmented lesions has increased steadily over the last 20 years, partly due to increased incidence of melanoma and partly because of increased awareness and referrals from general practitioners. This makes a unified and systematic approach to melanoma histopathology even more important.

A retrospective audit was therefore conducted to determine whether histological reporting of invasive cutaneous melanoma in the West Midlands region was compliant with the NMDS. If not compliant, we assessed whether the information provided in the reports included all the relevant data determining staging and considered necessary for clinical practice.

METHODS

Histopathology reports were identified in the West Midlands region via the West Midlands Cancer Intelligence Unit for

March 2002 to March 2003. Reports were only reviewed if written consent had been received from the clinician responsible for the patient. Each report was analysed by one of the two authors and compared with the NMDS. If all items were adhered to, they were considered compliant. If not, they were checked to see if they included a selection of clinical and staging parameters as required by the revised American Joint Committee on Cancer (AJCC) staging system for melanoma⁵ (table 1).

RESULTS

A total of 12 hospitals in the West Midlands region agreed to participate in the audit, from which a total of 543 cases of invasive primary cutaneous melanoma were identified. The reporting hospitals were anonymised. Written consent for reviewing reports was only obtained for 428/543 (79%) reports, which were subsequently analysed. Only 407/428 (95%) reports were appropriate for analysis; 21/428 (5%) were excluded due to lack of a complete pathology report or due to being coded incorrectly as melanoma.

Of the 407 reports, 69 (17%) (95% CI 14% to 20%) were fully compliant with the NMDS. Of the non-complaint reports, 45/361 (12%) (95% CI 9% to 16%) reported all staging and clinically relevant parameters outlined above. In this group, 23/45 (51%) reports only lacked a full macroscopic description; they would otherwise have been fully compliant with the NMDS. A total of 62/361 (17%) (95% CI 59% to 65%) reported all staging parameters, but failed to report some of the clinical parameters that were assessed. However, if microsatellites were excluded, this rises to 194/407 (32%). Breslow thickness was reported in all but one of the reports (99.7%); Clark level was reported in 344/407 (85%), ulceration in 280/407 (69%), and microsatellites were reported in 146/407 (36%). Figure 1 shows

Abbreviation: NMDS, National Minimum Dataset

Table 1 Table illustrating staging and clinically relevant parameters

Staging defining criteria (essential)	Other clinically relevant parameters (desirable)
Breslow thickness	Histological type
Clark level	Growth phase
Ulceration	Lymph/blood vessel invasion
Microsatellites	Perineural invasion
	Regression
	Completeness of excision

results following analysis of a selection of clinically relevant parameters.

DISCUSSION

The NMDS recommends a set of parameters for histological reporting of melanoma with the aim of ensuring that all the relevant information pertaining to the management of patients is provided, as well as ensuring clarity and consistency of written communication with clinicians. The Scottish Melanoma Group introduced a separate minimum dataset with considerable overlap to the NMDS in 2003.⁶

This audit of the NMDS in the West Midlands has shown that the majority of melanoma histopathology reports did not conform to the NMDS in the year following its introduction. However, despite this lack of consistency of reporting according to the NMDS, reporting of Breslow thickness was almost universal, which is an improvement compared with a UK audit of melanoma reporting in 1996 where only 87.1% of cases included this parameter.⁴

Possible reasons for this lack of compliance include: (1) use of the formal NMDS proforma is time consuming; (2) some pathologists produce an additional separate text-based report for clinicians, including only parameters which they feel are most relevant and may not include negative statements; (3) varying terminology/descriptions mean that it may not always be clear if a particular parameter has been reported or not; (4) varying levels of specialisation in dermatopathology across the region may influence use; (5) some pathologists may disagree about the need to report certain parameters.

The main items that are clinically important in the NMDS are the staging relevant parameters. Strictly speaking our figures for compliance with staging criteria are likely to be an underestimate in view of the fact that Clark's level is only important in those cases where Breslow thickness is less than 1 mm, and we did not account for this in our data collection/analysis.

Take-home messages

- The National Minimum Dataset (NMDS) recommends a set of parameters for the histological reporting of melanoma with the aim of improving clarity and consistency of written communication with clinicians. They provide information that is both "essential" and "desirable" for patient management.
- There was a low uptake of the NMDS in the year following its introduction in our region. Of note, reporting of ulceration and microsatellites was absent in up to a third of cases, but Breslow thickness reporting was almost universal.
- The use of electronic dataset reporting that insists all the fields are completed may ensure that the necessary data is completed to improve compliance with the NMDS.
- The NMDS needs to be reviewed regularly to confirm which data is clinically relevant.

The remaining parameters of the NMDS fall into two groups: the macroscopic appearance and other factors that are for interest/research. Neither of the latter two groups is essential for clinical management; however, in theory if any of these dataset items is absent, the report is non-compliant. Use of the proforma supplemented by regular audit should encourage more thorough reporting, which may otherwise be overlooked because of time constraints and increasing workloads of pathologists.

The traditional style of free text reporting allows for ambiguities to be left in and for specific points to be left out. The NMDS is presented as a series of statements against which tick boxes, numbers or short statements should be appended. There is a perception that there is reluctance by histopathologists to replace free text reports with proformas because they do not allow for flexibility; however, this may not be a reality. The use of electronic dataset reporting which insists that all the fields are completed may be a way to ensure that the necessary data is completed. Of equal importance is to decide if all the data currently provided in the NMDS is actually necessary, or if a smaller true minimal dataset should be used with the remaining items considered useful, but not essential.

Ultimately the benefits of standardised reporting will offset the perceived time and inconvenience factors associated with complying with the NMDS. As with all standards, regular

Figure 1 Frequency of reporting of clinically relevant parameters analysed.

review and audit must be undertaken to improve and update the dataset.

ACKNOWLEDGEMENTS

We thank the West Midlands Cancer Intelligence Unit for allowing us to access regional data on melanoma histopathology reporting. Thanks also go to the pathologists and consultants in each of the hospitals for allowing us to include pathology reports from patients under their care, and to Roger Holder for help with providing the confidence intervals.

Authors' affiliations

Manjit R Kaur, Agustin Martin-Clavijo, Jerry R Marsden, Skin Oncology Service, Department of Dermatology, University Hospital Birmingham Foundation Trust, Selly Oak Hospital, Selly Oak, UK

Peter S Colloby, Skin Oncology Service, Department of Histopathology, University Hospital Birmingham Foundation Trust, Selly Oak Hospital, Selly Oak, UK

Competing interests: None declared.

REFERENCES

- 1 **Standards and Minimum Datasets for Reporting Cancers**. Royal College of Pathologists. Minimum dataset for the histopathological reporting of malignant melanoma. February 2002: 17–25, www.rcpath.org/resources/pdf/skincancers2802.pdf (accessed 15 August 2006).
- 2 **Roberts DL**, Anstey AV, Barlow RJ, *et al*. U.K. Guidelines for the management of cutaneous melanoma. *Br J Dermatol* 2002;**146**:7–17.
- 3 **Cochran AJ**, Elashoff D, Morton DL, *et al*. Individualized prognosis for melanoma patients. *Hum Pathol* 2000;**31**:327–31.
- 4 **Miller JM**, Slater DN. Do histopathology reports of primary cutaneous melanoma contain enough essential information? *J Clin Pathol* 1996;**49**:202–4.
- 5 **Thompson JA**. The revised American Joint Committee on Cancer Staging System for Melanoma. *Semin Oncol* 2002;**29**:361–9.
- 6 **Scottish Intercollegiate Guidelines Network**. Cutaneous melanoma. A national clinical guideline. No 72. July 2003: 10–13, www.sign.ac.uk/guidelines/fulltext/72/index.html (accessed 15 August 2006).

Stay a step ahead with Online First

We publish all our original articles online before they appear in a print issue. This means that the latest clinical research papers go straight from acceptance to your browser, keeping you at the cutting edge of medicine. We update the site weekly so that it remains as topical as possible. Follow the Online First link on the home page and read the latest research.