



Investigation of what is required to introduce melanoma synoptic pathology reporting in WCMICS public hospitals

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BACKGROUND

Reducing variations in care is one of the four key priority areas of the Victorian cancer reform agenda. Amongst several factors, clinical decision making in cancer patients is based on information provided by the pathologist. This information allows for accurate disease diagnosis and staging and determining prognostic factors. Staging is the cornerstone of treatment planning (1), and the National Health and Medical Research Council (NHMRC) Clinical Practice Guidelines for the Management of Cutaneous Melanoma (2) recommend reporting of pathology results in a synoptic¹ format.

There is reportedly variable pathology reporting in melanoma across the WCMICS sites. This has been identified during work with the Skin/Melanoma Tumour Group.

This project aims to identify current practices and barriers to synoptic pathology reporting for melanoma, as well as examining what resources would be required to introduce synoptic pathology reporting across the Western Central Melbourne Integrated Cancer Service (WCMICS).

AIM

The objective of this project was to investigate what is required to introduce synoptic pathology reporting for patients with melanoma, with a view to improving diagnosis and treatment.

Key aims include:

- To identify current practices across the WCMICS sites regarding pathology reporting and the scope of the issue
- To identify barriers that exist which may prevent standardized synoptic reporting
- To identify what resources would be required for the implementation of synoptic pathology reporting.

Whilst there will be variation in the details of synoptic pathology reporting within each tumour stream and health care site, some findings of this project are generic, and therefore could easily be transferred across WCMICS tumour streams.

It should be noted that this project looks to identify issues and ways forward only, and that implementation of synoptic reporting is out of scope.

METHODOLOGY

Process

In order to scope opportunities for collaboration and information exchange, similar projects underway across other Integrated Cancer Services (ICS), the RCPA, the Victorian Cancer Registry, and within other groups both in Victoria and nationally, were identified via email communication and web searches.

¹ The word "synoptic" is derived from the Greek words συν (syn = together) and οψις (opsis = seeing), and describes observations that give a broad view of a subject at a particular time (a synopsis or summary). In the medical field, synoptic reporting refers to the use of standardized terminology in the report structure using standardized nomenclature, a set of universally agreed fields in a consistent format.

A Clinician Questionnaire was developed (Appendix 1) and filled out during meetings between Skin/Melanoma lead clinicians at each WCMICS hospital and the Project Officer. This questionnaire identified clinician's views of the benefits of synoptic pathology reporting, and a list of key pathology features that they base their treatment decisions on.

A Pathologist Questionnaire was also developed (Appendix 2), which was filled out during meetings between each hospital's lead melanoma pathologist and the Project Officer, and was also distributed by the lead pathologist to other pathologists in their department for completion (although not all pathologists did so). This questionnaire looked at current practice, pathologist's views towards synoptic reporting, perceived barriers to implementation, and key pathology features that should be included in reports.

From the results of the questionnaires, a discussion paper listing proposed pathology features to be included in a minimum data set for melanoma pathology reporting was drafted, and this was circulated to key stakeholders.

Management

The project was managed by a WCMICS Project Officer. Clinical leadership and project oversight was provided by Dr Chris Dow, in the capacity of Project Sponsor, on behalf of the Skin/Melanoma Tumour Group.

Progress updates were provided to the Tumour Group every 6 weeks, either via email or at the Tumour Group meeting.

RESULTS AND DISCUSSION

Identification of similar projects conducted by other groups

Many projects across Australia are looking at the introduction of synoptic pathology reporting, both for melanoma and for many other cancers.

- Other Victorian Integrated Cancer Services were contacted to identify if they were working on any similar projects, however replies indicated that they were not.
- The Royal College of Pathologists of Australia (RCPA) released a policy in March 2007 supporting "the use of synoptic reports as a desirable standard for reporting" (3).
- The RCPA have also completed a project entitled 'Synoptic Reporting in Pathology', looking at patterns of usage of synoptic reporting, and views of pathologists.
- The Cancer Institute NSW convened a Round Table in June 2007 with the topic being the use of structured pathology reports in cancer in Australia. The consensus statement agreed at the Round Table was that "structured reporting of cancer cases in anatomical pathology and haematology is likely to contribute to better cancer control through improvements in clinical management and treatment planning..." (4).
- As a result of this Round Table, the Cancer Institute NSW has established the Structured Pathology Reporting Standards for Cancer project (see http://www.cancerinstitute.org.au/cancer_inst/profes/struct_path.html).

When looking at melanoma specifically:

- The Sydney Melanoma Unit is conducting a project looking at moving from pure narrative melanoma pathology reports to reports incorporating synoptic reporting, and recently completed a study showing that synoptic

pathology reports for melanoma are more complete than non-synoptic reports (5).

- The soon to be released revised NHMRC Clinical Practice Guidelines for the Management of Melanoma will likely recommend a list of essential components of a histopathological report.

Results of the Stakeholder Questionnaires

Problems Experienced with Current Reporting Formats

Clinicians were asked about the problems experienced with the current standard of reporting (if any). Problems highlighted included that:

- There can be key data missing
- Although all the data is generally included in reports from WCMICS public pathology, it can be difficult to find within the report
- Reports from private firms are of a questionable level of quality
- Missing features
- Negative results are not always reported, leaving the clinician wondering if the test has actually been carried out.

Views on the Advantages of Implementing Synoptic Pathology Reporting

Regarding synoptic pathology reporting, the opinions of the clinicians and pathologists surveyed were generally positive, with several advantages reported in the questionnaires.

Both clinicians and pathologists noted that the use of synoptic pathology reports would assist clinicians by making it easier for the 'busy reader' to find the relevant facts:

"There is a need to provide prognostic data in a form that is easily accessible by clinicians" (pathologist)

"Synoptic reports are easier to get information from" (clinician)

There was also a view that synoptic reports increase accuracy and ensure all data is provided.

Many of the pathologists surveyed were also of the view that synoptic pathology reporting would also have advantages for themselves:

"Should be quicker for pathologists to report" (pathologist)

"Synoptic reports are generally a good idea – they mostly make a pathologist's job easier" (pathologist)

Clinicians and pathologists were both of the view that if synoptic reporting was not able to be implemented, at the very least pathologists should use a minimum data set to inform their reporting:

"I see a need for a minimum data set...common sense dictates that those items necessary for management and staging should be clearly and easily accessible in the report" (pathologist)

Finally, it was noted that synoptic pathology reporting would not only assist patient care, but would also be useful for use in research, as these reports would be easier to use for retrospective analyses.

Barriers to Implementing Synoptic Pathology Reporting

The questionnaires also aimed to ascertain views on what the barriers to implementation of synoptic pathology reporting are.

The barriers highlighted were generally around the logistics and infrastructure required for implementation rather than resistance from pathologists. Although some of the pathologists reported that older pathologists may not embrace this style of reporting, and that there would be some 'loss of craft', the surveyed pathologists themselves were generally in favour of synoptic reporting. A minority of pathologists were opposed to synoptic reporting, but supported the use of a minimum data set instead.

The main barrier cited in the results of the survey was the lack of flexibility of current laboratory information systems. It was thought difficult to be able to incorporate a synoptic reporting template into the information systems currently in use, due to the age of the systems and a perceived lack of resources available to assist with this work. Also, variation between systems at different hospitals was seen to make incorporation of standardised synoptic reports even more difficult.

Reaching agreement on both the format and content of the report was also seen to be a barrier to implementation. In regard to the format, pathologists (and some clinicians) were strongly of the view that there would need to be flexibility in the report format so that the complexities of each case can be conveyed:

“Need some ability for free text” (clinician)

“Every case is different” (pathologist)

In regard to the content of the report, reaching agreement as to which pathology fields should be included, both between pathologists and between pathologists and clinicians, was also perceived as a barrier to implementation:

“Differing opinions amongst a large group of diverse pathologists as to which items are acceptable, formatting etc” (pathologist)

Potential Minimum Data Set for Melanoma Pathology Reports

As opinions regarding synoptic reporting were generally positive, but there were several barriers identified that would prevent implementation, the project sought to determine a minimum data set to be included in pathology reports, whether synoptic or otherwise.

A Discussion Paper was put together containing a draft minimum data set. The data fields put forward were informed by the results of the stakeholder questionnaires and cross referenced with the fields required by the Victorian Cancer Registry and those recommended in the draft of the revised NHMRC Clinical Guidelines for the Management of Melanoma. This Discussion Paper was circulated among key stakeholders for discussion, and consensus was reached on a final minimum data set for melanoma pathology reports, broadly similar to many previously proposed in other forums.

Key Melanoma Pathology Features

Macroscopic

Site
Macro dimensions of specimen
Macro dimensions of lesion

Microscopic

Histological type
Breslow thickness
Margins of excision (nearest peripheral and deep)
Mitotic rate per mm²
Level of invasion (Clark)
Ulceration
Vascular invasion
Neural invasion
Evidence of regression
Satellite lesions
Tumour infiltrating lymphocytes

Nodes

Number of nodes
Number of nodes involved

It is recommended that this list be the starting point for any following project to introduce a standard MDS-based reporting protocol of melanomas by all WCMICS pathologists.

CONCLUSION

This project aimed to investigate what is required to introduce synoptic pathology reporting for melanoma in WCMICS public hospitals, focusing in particular on identifying the barriers to implementation.

It was identified that the pathologists surveyed were generally supportive of synoptic reporting *per se*, seeing advantages for both themselves and clinicians. However, it was identified that in practice there are several barriers preventing implementation, including:

- Outdated laboratory information systems
- Difficulties in reaching agreement on format and content.

The project then sought to determine a minimum data set of pathology features to be included in pathology reports, whether synoptic or otherwise. A list of 16 features was agreed upon by the stakeholders surveyed, and it is recommended that this list is adopted by WCMICS pathologists. The WCMICS Directorate is willing to provide in-kind support to assist in any implementation process.

Given that most of the pathologists surveyed generally supported synoptic pathology reporting for melanoma, an exploration of the feasibility of introducing this form of reporting may be a worthwhile exercise for other Tumour Groups where synoptic reporting is not already in use.

REFERENCES

- (1) Department of Human Services. *Patient Management Framework – Skin Tumour Stream - Melanoma*. Department of Human Services Melbourne 2006 <http://www.health.vic.gov.au/cancer/docs/pmfs/skinpmf.pdf>
- (2) Australian Cancer Network and National Health and Medical Research Council. *Clinical Practice Guidelines for the Management of Cutaneous Melanoma*. National Health and Medical Research Council, Sydney 1999 http://www.nhmrc.gov.au/publications/synopses/_files/cp68.pdf
- (3) Royal College of Pathologists of Australasia. *Synoptic Reports for Major Tumour Types*. March 2007
- (4) Michael Legg & Associates. *Outcomes from the National Round Table on Structured Pathology Reporting for Cancer held 28 June 2007: A report to the Cancer Institute NSW*. Sydney, July 2007 http://www.cancerinstitute.org.au/cancer_inst/profes/pdf/16058_report-national-round-table-on-structured-pathology-reporting.DOC
- (5) Karim RZ, van den Berg KS, Colman MH, McCarthy SW, Thompson JF, Scolyer RA. The advantage of using a synoptic pathology report format for cutaneous melanoma. *Histopathology* 2008, 52: 130-138

APPENDICES

- Appendix 1 Clinician Questionnaire
Appendix 2 Pathologist Questionnaire

LIST OF ABBREVIATIONS

ICS	Integrated Cancer Service
NHMRC	National Health and Medical Research Council
NSW	New South Wales
RCPA	Royal College of Pathologists Australia
WCMICS	Western and Central Melbourne Integrated Cancer Service

ACKNOWLEDGEMENTS

Clinicians and Pathologists involved
Administration Coordinators



INVESTIGATION OF WHAT IS REQUIRED TO INTRODUCE SYNOPTIC PATHOLOGY REPORTING FOR MELANOMA

Your co-operation is sought for a study of the feasibility of introduction of either standardised synoptic reporting or standardised minimum data set based reporting for melanoma across the various pathology departments in the Western & Central Melbourne Integrated Cancer Service (WCMICS) public hospitals. As part of this we are seeking responses to a short questionnaire of both anatomical pathologists who report melanomas and clinicians who treat melanomas.

Definitions

By **synoptic report**, we mean a preformatted list of report items completed for each melanoma reported, standardised across the WCMICS – forming either the whole report or part of it. [example included]

By **minimum data set (MDS)** we mean a report which includes a standardised set of key parameters, not necessarily expressed in a standard style or order, not necessarily constituting the complete set of data or parameters contained within the report [example list attached].

Questions

Do you see a need for either synoptic pathology reporting or a minimum data set for melanoma?

(Any published evidence for or against, that you feel is worthwhile, is welcome)

What are the key pathology features of melanoma on which you base your treatment decisions?

Macro:

- Macro dimensions of specimen
- Macro dimensions of lesion
- Minimal distance of lesion from margins
- Profile of lesion (flat/dome-shaped/polypoid)
- Color of lesion including areas suspicious for regression or ulceration

Micro:

- Histological type of melanoma
- Breslow thickness
- Clark level
- Presence or absence of ulceration of overlying epidermis
- Mitotic index (per mm²)
- Vascular invasion
- Neural invasion

- Clearance margins
- Satellite lesions
- Radial Vs Vertical Growth Phase
- Tumour infiltrating lymphocytes (TILs – none, low, high)
- Evidence of regression
- Presence of associated benign naevus
- Minimal distance of lesion from margins

Anything else or any comments on above?

What are the parameters you would like to see in a melanoma synoptic report or minimum data set based report?

What are the problems, if any, you currently experience with how pathology reports for melanoma? (e.g. is key data often omitted, difficulty in finding important info on reports, often having to clarify info with pathologist)

What are your views on using a minimum data set as opposed to synoptic pathology report?

Would you see a benefit in standardised reporting across WCMICS sites?

Thank you for your time. Results from this project will be summarised in a report (de-identified) which will then be distributed to WCMICS Tumour Group members and placed on our website. If you would like a copy, please contact Michelle Fleming, WCMICS Project Officer, at michelle.fleming@petermac.org.



INVESTIGATION OF WHAT IS REQUIRED TO INTRODUCE SYNOPTIC PATHOLOGY REPORTING FOR MELANOMA & LYMPHOMA

Your co-operation is sought for parallel studies of the feasibility of introduction of either standardised synoptic reporting or standardised minimum data set based reporting for each of melanoma and lymphoma, across the various pathology departments in the Western & Central Melbourne Integrated Cancer Service (WCMICS) public hospitals. As part of this we are seeking responses to a short questionnaire of both anatomical pathologists who report melanomas and/or lymphomas and clinicians who treat melanomas and/or lymphomas.

The aim of this project is not to implement synoptic pathology reporting, but to investigate the views and barriers around introducing it.

Definitions

By **synoptic report**, we mean a preformatted list of report items completed for each melanoma or lymphoma reported, standardised across the WCMICS – forming either the whole report or part of it. [example included]

By **minimum data set (MDS)** we mean a report which includes a standardised set of key parameters, not necessarily expressed in a standard style or order, not necessarily constituting the complete set of data or parameters contained within the report [example list attached].

Questions

1. In your present position, do you report (however infrequently)

melanomas? Yes No

lymphomas? Yes No

2. Do you see a need for either synoptic pathology reporting or a minimum data set for melanoma or lymphoma? (Reference to any published evidence for or against, that you feel is worthwhile, is welcome)

3. What is your current method of reporting melanoma and/or lymphoma? Can we have a de-identified example?

4. What are your views on using synoptic pathology reporting of melanoma and lymphoma & why? (e.g. any pro's or con's ?, personal or general)

5. What are your views on using a minimum data set as opposed to synoptic pathology report?

6. What do you see as the barriers to synoptic pathology reporting of melanoma and lymphoma?

7. What items should be included as part of a minimum data set for melanoma pathology reporting?

Clinical information to be supplied by referring clinician:

- Patient age & sex
- Location of lesion on body
- Clinical duration of lesion, the history of change or the presenting complaint of the patient
- The clinically suspected diagnosis
- The type of biopsy (punch, shave, excision etc)
- History of any previous biopsy

Pathologist's report

Macro:

- Site
- Procedure
- Macro dimensions of specimen
- Macro dimensions of lesion
- Minimal distance of lesion from margins
- Profile of lesion (flat/dome-shaped/polypoid)
- Color of lesion including areas suspicious for regression or ulceration

Micro:

- Histological type of melanoma
- Breslow thickness
- Clark level
- Presence or absence of ulceration of overlying epidermis
- Mitotic index (per mm²)
- Vascular invasion
- Neural invasion
- Clearance margins
- Satellite lesions
- Radial Vs Vertical Growth Phase
- Tumour infiltrating lymphocytes (TILs – none, low, high)
- Evidence of regression
- Presence of associated benign naevus
- Minimal distance of lesion from margins

Anything else or any comments on above?

8. What items should be included as part of a minimum data set for lymphoma pathology reporting?

9. Do you think it is possible to standardise reporting across WCMICS sites & are there so synoptic report formats you would not support?

Thank you for your time. Results from this project will be summarised in a report (de-identified) which will then be distributed to WCMICS Tumour Group members and placed on our website. If you would like a copy, please contact Michelle Fleming, WCMICS Project Officer, at michelle.fleming@petermac.org.