Australian Government

Department of Health

Application Form

SENTINEL LYMPH NODE BIOPSY FOR INTERMEDIATE THICKNESS MELANOMA

1485.1

(New and / or Amended

Request for Public Funding)

(Version 2.4)

This application form is to be completed for new and amended requests for public funding (including but not limited to the Medicare Benefits Schedule (MBS)). It describes the detailed information that the Australian Government Department of Health requires to determine whether a proposed medical service is suitable.

Please use this template, along with the associated Application Form Guidelines to prepare your application. Please complete all questions that are applicable to the proposed service, providing relevant information only. Applications not completed in full will not be accepted.

Should you require any further assistance, departmental staff are available through the Health Technology Assessment Team (HTA Team) on the contact numbers and email below to discuss the application form, or any other component of the Medical Services Advisory Committee process.

Email: hta@health.gov.au
Website: www.msac.gov.au

PART 1 - APPLICANT DETAILS

1. Applicant details (primary and alternative contacts)

Corporation / partnership details (where relevant): n/a
Corporation name: The Australian Society of Specialist General Surgeons
ABN: 31 091 317 690
Business trading name: General Surgeons Australia

Primary contact name: Sarah Benson

Primary contact numbers	
Business:	**REDACTED**
Mobile:	
Email:	**REDACTED**

Alternative contact name: Dr Michael Donovan FRACS

Alternative contact numbers
Business:
Mobile:
Emai:

2. (a) Are you a lobbyist acting on behalf of an Applicant?

☐ Yes
☒ No

(b) If yes, are you listed on the Register of Lobbyists?

☐ Yes
☐ No

PART 2 - INFORMATION ABOUT THE PROPOSED MEDICAL SERVICE

3. Application title

SENTINEL LYMPH NODE BIOPSY FOR INTERMEDIATE THICKNESS MELANOMA

4. Provide a succinct description of the medical condition relevant to the proposed service (no more than 150 words - further information will be requested at Part F of the Application Form)

Melanoma is a malignancy of skin pigment cells (melanocytes). The lifetime risk for melanoma in Australia is 1 in 24 for males and 1 in 35 for females. In 2011 there were 11,500 new cases diagnosed in Australia (Cancer Council Australia) and more than 1,500 die each year from the disease.

Fortunately, about 70% of cases are diagnosed at an early stage (<1.0mm thickness) where 5-year survival is >95%. With increasing depth, there is a stepwise decline in survival. Patients with intermediate thickness melanoma (greater than 1.0mm depth) have an increased risk of lymph node involvement and hence poorer survival. Sentinel node status is the most significant prognostic indicator in patients with intermediate thickness melanoma.

Patients with lymph node involvement whose tumour harbours a BRAF mutation can now be treated with adjuvant molecular therapy (Dabrafenib + Trametinib) with a 43% improvement in melanoma specific mortality (approved on PBS). Patients are also able to access adjuvant immunotherapy, which is associated with a significant reduction in risk of relapse via an access program (currently under review with PBAC).

5. Provide a succinct description of the proposed medical service (no more than 150 words - further information will be requested at Part 6 of the Application Form)

Sentinel lymph node biopsy (SLNBx) is increasingly being performed in Australia for intermediate thickness melanoma. It provides important prognostic information for appropriately counselled patients and is therapeutic in the majority of patients that have a positive SLN.

Currently, this procedure is not coded in the MBS and alternative item numbers do not accurately reflect its use or procedural requirements. The suggested medical service description would be:

> SLNBx with excision of lymph node(s) identified by a combination of blue dye (lymphotropic dye injection) and lymphoscintography/gamma probe, ideally performed at the time of the primary melanoma wide excision (although this is not always possible).

A patient with an involved sentinel lymph node is now eligible for adjuvant targeted therapy with Dabrafenib and Trametinib (under PBS) with an associated 43% reduction in risk of melanoma mortality (Long NEJM 2017). The use of adjuvant immunotherapy agents (with demonstrated improvement in relapse free survival) are also under consideration by PBAC to improve melanoma outcomes.

6. (a) Is this a request for MBS funding?

☒ Yes
☐ No

(b) If yes, is the medical service(s) proposed to be covered under an existing MBS item number(s) or is a new MBS item(s) being sought altogether?

☐ Amendment to existing MBS item(s)
☒ New MBS item(s)

(c) If an amendment to an existing item(s) is being sought, please list the relevant MBS item number(s) that are to be amended to include the proposed medical service:

(d) If an amendment to an existing item(s) is being sought, what is the nature of the amendment(s)?

i. ☐ An amendment to the way the service is clinically delivered under the existing item(s)
ii. ☐ An amendment to the patient population under the existing item(s)
iii. ☐ An amendment to the schedule fee of the existing item(s)
iv. ☐ An amendment to the time and complexity of an existing item(s)
v. ☐ Access to an existing item(s) by a different health practitioner group

vi. ☐ Minor amendments to the item descriptor that does not affect how the service is delivered
vii. ☐ An amendment to an existing specific single consultation item
viii. ☐ An amendment to an existing global consultation item(s)
ix. ☐ Other (please describe below):

(e) If a new item(s) is being requested, what is the nature of the change to the MBS being sought?

i. ☐ A new item which also seeks to allow access to the MBS for a specific health practitioner group
ii. ☒ A new item that is proposing a way of clinically delivering a service that is new to the MBS (in terms of new technology and / or population)
iii. ☐ A new item for a specific single consultation item
iv. ☐ A new item for a global consultation item(s)

(f) Is the proposed service seeking public funding other than the MBS?

☐ Yes
☒ No

(g) If yes, please advise:

7. What is the type of service:

☒ Therapeutic medical service
☒ Investigative medical service
☐ Single consultation medical service
☐ Global consultation medical service
☐ Allied health service
☐ Co-dependent technology
☐ Hybrid health technology

8. For investigative services, advise the specific purpose of performing the service *(which could be one or more of the following)*:

i. ☐ To be used as a screening tool in asymptomatic populations
ii. ☒ Assists in establishing a diagnosis in symptomatic patients
iii. ☒ Provides information about prognosis
iv. ☒ Identifies a patient as suitable for therapy by predicting a variation in the effect of the therapy
v. ☐ Monitors a patient over time to assess treatment response and guide subsequent treatment decisions

9. Does your service rely on another medical product to achieve or to enhance its intended effect?

☐ Pharmaceutical / Biological
☐ Prosthesis or device
☒ No

10. (a) If the proposed service has a pharmaceutical component to it, is it already covered under an existing Pharmaceutical Benefits Scheme (PBS) listing?

☐ Yes
☒ No

(b) If yes, please list the relevant PBS item code(s):

Insert PBS item code(s) here

(c) If no, is an application (submission) in the process of being considered by the Pharmaceutical Benefits Advisory Committee (PBAC)?

☐ Yes (please provide PBAC submission item number below)
☒ No

(d) If you are seeking both MBS and PBS listing, what is the trade name and generic name of the pharmaceutical?

Trade name: Insert trade name here
Generic name: Insert generic name here

11. (a) If the proposed service is dependent on the use of a prosthesis, is it already included on the Prostheses List?

☐ Yes
☐ No

(b) If yes, please provide the following information (where relevant):

Billing code(s): Insert billing code(s) here
Trade name of prostheses: Insert trade name here
Clinical name of prostheses: Insert clinical name here
Other device components delivered as part of the service: Insert description of device components here

(c) If no, is an application in the process of being considered by a Clinical Advisory Group or the Prostheses List Advisory Committee (PLAC)?

☐ Yes
☒ No

(d) Are there any other sponsor(s) and / or manufacturer(s) that have a similar prosthesis or device component in the Australian market place which this application is relevant to?

☐ Yes
☒ No

(e) If yes, please provide the name(s) of the sponsor(s) and / or manufacturer(s):

Insert sponsor and/or manufacturer name(s) here

12. Please identify any single and / or multi-use consumables delivered as part of the service?

Single use consumables:	Lymphoscintography requires an injection of technetium antimony sulphur colloid or equivalent prepared by a nuclear physician, injected into the site of the primary melanoma with a needle and syringe. Patent Blue V dye 1ml is injected by the surgeon with a needle and syringe. The reusable hand-held gamma probe (same as that used in breast cancer surgery) is required intraoperatively and is covered with a disposable sterile plastic sleeve for the procedure. The wound for the SLNBx is closed with the same suture material as the primary melanoma site but generally would require an additional small dressing. The procedure is currently being done but with existing non-specific item numbers that vary between surgeons.
Multi-use consumables:	n/a

PART 3 - INFORMATION ABOUT REGULATORY REQUIREMENTS

13. (a) If the proposed medical service involves the use of a medical device, in-vitro diagnostic test, pharmaceutical product, radioactive tracer or any other type of therapeutic good, please provide the following details:

Type of therapeutic good:	Lymphoscintigraphy (identical process to SLNBx for breast cancer (30299, 30300)). This is performed just prior to the operation in the nuclear medicine department and is not part of the operation itself, nor administered by the surgeon. Lymphoscintigraphy has its own MBS number (61469, 61712). The tracer activity is still detectable during the operation and is necessary for the conduct of the operation. It is detected by a hand-held gamma probe.
Manufacturer's name:	Several manufacturers of gamma probes (e.g. Dilon Diagnostics), or Magnetic nanoparticle tracer (Endomagnetics Ltd)
Sponsor's name:	n/a

(b) Is the medical device classified by the TGA as either a Class III or Active Implantable Medical Device (AIMD) against the TGA regulatory scheme for devices?

☐ Class III
☐ AIMD
☒ N/A

14. (a) Is the therapeutic good to be used in the service exempt from the regulatory requirements of the *Therapeutic Goods Act 1989*?

☐ Yes (If yes, please provide supporting documentation as an attachment to this application form)
☒ No

(b) If no, has it been listed or registered or included in the Australian Register of Therapeutic Goods (ARTG) by the Therapeutic Goods Administration (TGA)?

☒ Yes (if yes, please provide details below)
☐ No

ARTG listing, registration or inclusion number: 224067 *(one example of a hand-held probe)*
TGA approved indication(s), if applicable: Insert approved indication(s) here
TGA approved purpose(s), if applicable: Insert approved purpose(s) here

15. If the therapeutic good has not been listed, registered or included in the ARTG, is the therapeutic good in the process of being considered for inclusion by the TGA?

☐ Yes (please provide details below)
☒ No

Date of submission to TGA: Insert date of submission here
Estimated date by which TGA approval can be expected: Insert estimated date here
TGA Application ID: Insert TGA Application ID here
TGA approved indication(s), if applicable: If applicable, insert description of TGA approved indication(s) here
TGA approved purpose(s), if applicable: If applicable, insert description of TGA approved purpose(s) here

16. If the therapeutic good is not in the process of being considered for listing, registration or inclusion by the TGA, is an application to the TGA being prepared?

☐ Yes (please provide details below)
☐ No

Estimated date of submission to TGA: Insert date of submission here
Proposed indication(s), if applicable: If applicable, insert description of proposed indication(s)
Proposed purpose(s), if applicable: If applicable, insert description of proposed purpose(s) here

PART 4 - SUMMARY OF EVIDENCE

17. **Provide an overview of all key journal articles or research published in the public domain related to the proposed service that is for your application (limiting these to the English language only).** ***Please do not attach full text articles, this is just intended to be a summary.***

	Type of study design*	**Title of journal article or research project (including any trial identifier or study lead if relevant)**	**Short description of research (max 50 words)****	**Website link to journal article or research (if available)**	**Date of publication *****
1.	Randomised trial	Sentinel-node biopsy or nodal observation in melanoma.	1269 patients with an intermediate-thickness primary cutaneous melanoma were randomly assigned to wide excision and postoperative observation of regional lymph nodes with lymphadenectomy if nodal relapse occurred, or to wide excision and sentinel-node biopsy with immediate lymphadenectomy if nodal micrometastases were detected on biopsy.	http://www.ncbi.nlm.nih.gov/pubmed/17005948	2006
2.	Retrospective analysis	Clinicopathologic Predictors of Sentinel Lymph Node Metastasis in Thin Melanoma	Retrospective review of 1240 patients in the multi-institutional Sentinel Lymph Node Working Group database from 1994 to 2012 to determine factors predictive of sentinel lymph node (SLN) metastasis in thin melanoma.	http://jco.ascopubs.org/content/early/2013/10/29/JCO.2013.50.1114.abstract	2013
3.	Randomised	Final trial report of sentinel-node biopsy versus nodal observation in melanoma	Sentinel-node biopsy, a minimally invasive procedure for regional melanoma staging, was evaluated in a phase 3 trial in 2001 patients with primary cutaneous melanomas	https://www.ncbi.nlm.nih.gov/pubmed/24521106?dopt=Abstract	2014
4.	Meta-analysis	Outcome following sentinel node biopsy plus wide local excision versus wide local excision only for primary cutaneous melanoma: Analysis of 5840 patients treated at a single institution.	Worldwide, sentinel node biopsy (SNB) is now a standard staging procedure for most patients with melanomas 1mm or more in thickness, but its therapeutic benefit is not clear, pending randomized trial results. This study sought to assess the therapeutic benefit of SNB in a large, nonrandomized patient cohort.	https://journals.lww.com/annalsofsurgery/Abstract/2014/07000/Outcome_Following_Sentinel_Node_Biopsy_Plus_Wide.24.aspx	2014

	Type of study design*	Title of journal article or research project (including any trial identifier or study lead if relevant)	Short description of research (max 50 words)**	Website link to journal article or research (if available)	Date of publication ***
5.	Meta-analysis	Sentinel Lymph Node Biopsy in T4 Melanoma: An Important Risk-Stratification Tool.	A meta-analysis of 10 retrospective studies of patients with T4 melanoma demonstrating the role of sentinel lymph node biopsy as the most significant predictor of outcome for patients with T4 melanoma (HR=2.3)	http://link.springer.com/article/10.1245%2Fs10434-015-4894-4	2015
6.	Review	Sentinel node biopsy in melanoma: Current controversies addressed.	Review of controversies in patient selection and follow-up treatment	http://www.ncbi.nlm.nih.gov/pubmed/27590685	2016
7.	Randomised controlled trial	Complete lymph node dissection versus no dissection in patients with sentinel lymph node biopsy positive melanoma (DeCOG-SLT): a multicentre, randomised, phase 3 trial.	Randomised controlled trial of 483 patients with sentinel node positive melanoma randomised to nodal observation versus completion lymph node dissection.	http://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(16)00141-8/abstract	2016
8.	Meta-analysis	Sentinel lymph node biopsy plus wide local excision vs. wide location excision alone for primary cutaneous melanoma: a systematic review and meta-analysis.	Although no significant survival difference was observed in four of the six series, the pooling summary data from all the studies that deal with this issue suggested that SLNBx is associated with a significantly better outcome compared with WLEA for localized melanoma.	http://www.ncbi.nlm.nih.gov/pubmed/27592851	2017
9.	Randomised controlled trial	Completion Dissection or Observation for Sentinel-Node Metastasis in Melanoma	MSLT-II trial showing no benefit from completion lymphadenectomy for positive SLNBx patients	https://www.nejm.org/doi/10.1056/NEJMoa1613210	2017

	Type of study design*	Title of journal article or research project (including any trial identifier or study lead if relevant)	Short description of research (max 50 words)**	Website link to journal article or research (if available)	Date of publication ***
10.	Randomised controlled trial	Adjuvant Dabrafenib plus Trametinib in Stage III BRAF-Mutated Melanoma	Combination therapy with the BRAF inhibitor dabrafenib plus the MEK inhibitor trametinib improved survival in patients with advanced melanoma with BRAF V600 mutations. The study sought to determine whether adjuvant dabrafenib plus trametinib would improve outcomes in patients with resected, stage III melanoma with BRAF V600 mutations.	https://www.nejm.org/doi/full/10.1056/NEJMoa1708539	2017
11.	Meta-analysis	Follow-up recommendations after diagnosis of primary cutaneous melanoma: A population-based study in New South Wales, Australia	Follow-up practices after diagnosis and treatment of primary cutaneous melanoma vary considerably. This study aimed to determine factors associated with recommendations for follow-up setting, frequency, skin surveillance, and concordance with clinical guidelines.	https://www.ncbi.nlm.nih.gov/pubmed/29299710	2018
12.	Randomised controlled trial	Longer Follow-Up Confirms Relapse-Free Survival Benefit With Adjuvant Dabrafenib Plus Trametinib in Patients With Resected *BRAF* ^{V600}–Mutant Stage III Melanoma	Updated original RCT study on the BRAF/MEK combination treatment	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6286159/	2018
13.	Randomised controlled trial	Final Analysis of DeCOG-SLT Trial: No Survival Benefit for Complete Lymph Node Dissection in Patients With Melanoma With Positive Sentinel Node	Final analysis with 72 months of median follow up on the results of the phase III German Dermatologic Cooperative Oncology Group trial (DeCOG) comparing distant metastasis-free survival, recurrence-free survival, and overall survival in patients with positive sentinel lymph-node biopsy who were randomly assigned to complete lymph node dissection or observation.	https://www.ncbi.nlm.nih.gov/pubmed/31557067	2019

	Type of study design*	Title of journal article or research project (including any trial identifier or study lead if relevant)	Short description of research (max 50 words)**	Website link to journal article or research (if available)	Date of publication ***
14.	Review	New paradigm for stage III melanoma: from surgery to adjuvant treatment	A general review of current status of treatment of stage III melanoma.	https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-019-2012-2#Tab2	2019
15.	Randomised, double-blind, placebo-controlled, phase 3 study	Patient-reported outcomes in patients with resected, high-risk melanoma with *BRAF*^{V600E} or *BRAF*^{V600K} mutations treated with adjuvant dabrafenib plus trametinib (COMBI-AD): a randomised, placebo-controlled, phase 3 trial.	Quality of life study on the PBS approved combination immunotherapy treatment.	https://www.ncbi.nlm.nih.gov/pubmed/30928620	2019
16.	Cost benefit analysis	Cost-effectiveness of dabrafenib and trametinib in combination as adjuvant treatment of BRAF V600E/K mutation-positive melanoma from a US healthcare payer perspective.	Cost benefit analysis (QALY) for combination immunotherapy.	https://www.ncbi.nlm.nih.gov/pubmed/31223037	2019

** Categorise study design, for example meta-analysis, randomised trials, non-randomised trial or observational study, study of diagnostic accuracy, etc.*

***Provide high level information including population numbers and whether patients are being recruited or in post-recruitment, including providing the trial registration number to allow for tracking purposes.*

**** If the publication is a follow-up to an initial publication, please advise.*

18. Identify yet to be published research that may have results available in the near future that could be relevant in the consideration of your application by MSAC (limiting these to the English language only). *Please do not attach full text articles, this is just intended to be a summary.*

	Type of study design*	**Title of research (including any trial identifier if relevant)**	**Short description of research (max 50 words)****	**Website link to research (if available)**	**Date*****

** Categorise study design, for example meta-analysis, randomised trials, non-randomised trial or observational study, study of diagnostic accuracy, etc.*

***Provide high level information including population numbers and whether patients are being recruited or in post-recruitment.*

****Date of when results will be made available (to the best of your knowledge).*

PART 5 - CLINICAL ENDORSEMENT AND CONSUMER INFORMATION

19. **List all appropriate professional bodies / organisations representing the group(s) of health professionals who provide the service (please attach a statement of clinical relevance from each group nominated):**
    a. General Surgeons Australia (The Applicant - no support letter attached)
    b. Australian Society of Plastic Surgeons
    c. The Australasian College of Dermatologists
    d. The Royal Australian College of General Practitioners
    e. Australasian Association of Nuclear Medicine Specialists (AANMS) may also be relevant if information is required on radioisotopes.
    f. Melanoma Institute Australia

20. **List any professional bodies / organisations that may be impacted by this medical service (i.e. those who provide the comparator service):**

    N/A

21. **List the consumer organisations relevant to the proposed medical service (please attach a letter of support for each consumer organisation nominated):**
    a. Melanoma Patients Australia

22. **List the relevant sponsor(s) and / or manufacturer(s) who produce similar products relevant to the proposed medical service:**

    N/A

23. **Nominate two experts who could be approached about the proposed medical service and the current clinical management of the service(s):**

Name of expert 1	A/Prof David Gyorki FRACS
Telephone number(s)	
Email address	
Justification of expertise	Surgical Oncologist, Division of Cancer Surgery, Peter MacCallum Cancer Centre, Melbourne
Name of expert 2	Prof Andrew Spillane FRACS
Telephone number(s)	
Email address	
Justification of expertise	Professor of Surgical Oncology, University of Sydney, Northern Clinical School; Breast and Surgical Oncology at the Poche Centre, Mater Hospital North Sydney, Royal North Shore Hospital; Faculty Member Melanoma Institute Australia

Please note that the Department may also consult with other referrers, proceduralists and disease specialists to obtain their insight.

PART 6 - POPULATION (AND PRIOR TESTS), INTERVENTION, COMPARATOR, OUTCOME (PICO)

PART 6a - INFORMATION ABOUT THE PROPOSED POPULATION

24. Define the medical condition, including providing information on the natural history of the condition and a high level summary of associated burden of disease in terms of both morbidity and mortality:

Melanoma is a malignancy of skin pigment cells (melanocytes). The lifetime risk for melanoma in Australia is 1 in 24 for males and 1 in 35 for females. There are more than 12,000 new cases diagnosed in Australia each year and more than 1,500 die each year from the disease. Fortunately, most cases are diagnosed at an early stage (<1.0mm thickness) where 5-year survival is >95%. With increasing depth, there is a stepwise decline in survival.

Sentinel node status is the most significant prognostic indicator in patients with intermediate thickness melanoma. Patients with intermediate thickness melanoma (greater than 1.0mm depth) have an increased risk of lymph node involvement and hence poorer survival.

Sentinel lymph node positive patients with *BRAF*^{V600}-mutation are eligible for combination therapy with the BRAF inhibitor Dabrafenib plus the MEK inhibitor Trametinib with improvements in relapse-free survival and distant metastasis free survival. Checkpoint blockade immunotherapy agents have also shown improvements in relapse free survival for stage III (including sentinel lymph node positive) patients, these agents for this indication may also soon become available through the PBS. These include Nivolumab and Pembrolizumab.

25. Specify any characteristics of patients with the medical condition, or suspected of, who are proposed to be eligible for the proposed medical service, including any details of how a patient would be investigated, managed and referred within the Australian health care system in the lead up to being considered eligible for the service:

The proposed patient population that would benefit from the use of this service is patients with malignant cutaneous melanoma depth greater or equal to 1.0mm, or thin melanoma with high risk features such as ulceration, high mitotic rate, satellites or lymphovascular invasion. The presence or absence of nodal disease impacts on long term survival. Lymph node positive patients may subsequently be offered a nodal clearance for local disease control but following MSLT-II and DeCOG SLT this is now infrequent.

Patients with a positive SLNBx were included in clinical trials of adjuvant systemic therapy which have reported major improvements in outcome for patients with stage III melanoma as reflected in the Australian melanoma guidelines (https://wiki.cancer.org.au/australia/Clinical_question). Thus sentinel lymph node positive patients are now eligible for adjuvant treatment with Dabrafenib/Trametinib but as the studies mature, this is likely for immunotherapy treatments with Nivolumab and Pembrolizumab in the near future.

26. Define and summarise the current clinical management pathway *before* patients would be eligible for the proposed medical service (supplement this summary with an easy to follow flowchart [as an attachment to the Application Form] depicting the current clinical management pathway up to this point):

Currently patients with intermediate thickness melanoma either have clinical surveillance of the regional lymph nodes or SLNBx depending on patient wishes, after an informed discussion with their general practitioner, dermatologist, or surgeon.

PART 6b - INFORMATION ABOUT THE INTERVENTION

27. Describe the key components and clinical steps involved in delivering the proposed medical service:

- Identify appropriate patients (melanoma greater than 1.0mm depth)
- Obtain informed consent for the proposed medical service
- Pre-operative lymphoscintography to identify the nodal basin
- Subcutaneous injection Patent Blue V around site of the primary melanoma
- Appropriate clearance of the primary melanoma based on Cancer Council Guidelines (https://wiki.cancer.org.au/australia/Guidelines:Melanoma)

- Identification of the sentinel lymph node(s) using a combination of hand-held gamma probe and visualisation of blue lymphatics
- Removal of sentinel lymph node(s) and refer for histopathology
- Wound closure in the usual fashion

28. Does the proposed medical service include a registered trademark component with characteristics that distinguishes it from other similar health components?

No

29. If the proposed medical service has a prosthesis or device component to it, does it involve a new approach towards managing a particular sub-group of the population with the specific medical condition?

N/A

30. If applicable, are there any limitations on the provision of the proposed medical service delivered to the patient (i.e. accessibility, dosage, quantity, duration or frequency):

Lymphoscintography requires nuclear medicine services. It is possible to perform SLNBx with blue dye (lymphotropic dye injection) alone, although identification rates are lower.

The best results are achieved with combination of lymphoscintography and blue dye (lymphotropic dye injection) (greater than 95% identification).

31. If applicable, identify any healthcare resources or other medical services that would need to be delivered <u>at the same time</u> as the proposed medical service:

N/A

32. If applicable, advise which health professionals will primarily deliver the proposed service:

The service can be performed by a surgeon trained in the technique (including General Surgeon, Plastic and Reconstructive Surgeon, ENT, procedural dermatologist).

33. If applicable, advise whether the proposed medical service could be delegated or referred to another professional for delivery:

A significant proportion of cutaneous melanomas are treated in General Practice. For SLNBx to be performed, this would require referral to an appropriately trained proceduralist / specialist (this is already happening on a wide scale in the absence of a specific melanoma related MBS number).

34. If applicable, specify any proposed limitations on who might deliver the proposed medical service, or who might provide a referral for it:

A proceduralist / specialist who has undergone training in the technique of SLNBx.

35. If applicable, advise what type of training or qualifications would be required to perform the proposed service, as well as any accreditation requirements to support service delivery:

Similar to training in SLNBx in breast cancer, it is suggested that the first 20 cases be supervised.

Surgeons already performing SLNBx in the management of breast cancer will not need additional training.

36. (a) Indicate the proposed setting(s) in which the proposed medical service will be delivered (select <u>ALL</u> relevant settings):

- ☒ Inpatient private hospital (admitted patient)
- ☒ Inpatient public hospital (admitted patient)
- ☐ Private outpatient clinic
- ☐ Public outpatient clinic
- ☐ Emergency Department
- ☐ Private consulting rooms - GP
- ☐ Private consulting rooms - specialist
- ☐ Private consulting rooms - other health practitioner (nurse or allied health)
- ☒ Private day surgery clinic (admitted patient)
- ☐ Private day surgery clinic (non-admitted patient)
- ☒ Public day surgery clinic (admitted patient)
- ☐ Public day surgery clinic (non-admitted patient)
- ☐ Residential aged care facility

☐ Patient's home
☐ Laboratory
☐ Other - please specify below

Specify further details here

(b) Where the proposed medical service is provided in more than one setting, please describe the rationale related to each:

The service can only be performed in a licenced operating theatre.

37. Is the proposed medical service intended to be entirely rendered in Australia?

☒ Yes
☐ No - please specify below

Specify further details here

PART 6c - INFORMATION ABOUT THE COMPARATOR(S)

38. Nominate the appropriate comparator(s) for the proposed medical service, i.e. how is the proposed population currently managed in the absence of the proposed medical service being available in the Australian health care system (including identifying health care resources that are needed to be delivered at the same time as the comparator service):

Currently patients with intermediate thickness melanoma either have clinical surveillance of the regional lymph nodes or SLNBx depending on patient wishes, after an informed discussion with their general practitioner, dermatologist, or surgeon. This is discussed in the evidence-based Australian Melanoma Guidelines, which recommend "Sentinel lymph node biopsy should be considered for all patients with melanoma greater than 1 mm in thickness and for patients with melanoma greater than 0.75 mm with other high risk pathological features" (https://wiki.cancer.org.au/australia/Clinical_question)

SLNBx for melanoma is already being performed within the MBS but cannot be identified from other indications for lymph node biopsy (30075, 30329, 30332, 31420, 31423, 30300, 30299).

If the observation only group develop clinical or radiological evidence of nodal disease during follow-up (about 20%) then the morbid procedure of therapeutic lymph node dissection is standard of care for those patients provided there is no distant metastases..

39. Does the medical service (that has been nominated as the comparator) have an existing MBS item number(s)?

☒ Yes (please list all relevant MBS item numbers below)
☐ No

30075, 30329, 30332, 31420, 31423, 30300, 30299

40. Define and summarise the current clinical management pathway/s that patients may follow *after* they receive the medical service that has been nominated as the comparator (supplement this summary with an easy to follow flowchart [as an attachment to the Application Form] depicting the current clinical management pathway that patients may follow from the point of receiving the comparator onwards, including health care resources):

Currently patients with intermediate thickness melanoma either have clinical surveillance of the regional lymph nodes or SLNBx depending on patient wishes, after an informed discussion with their general practitioner, dermatologist, or surgeon. Patients with a positive sentinel lymph node may be referred on to a medical oncologist for consideration of adjuvant immunotherapy (question 24).

41. (a) Will the proposed medical service be used in addition to, or instead of, the nominated comparator(s)?

☐ In addition to (i.e. it is an add-on service)
☒ Instead of (i.e. it is a replacement or alternative)

(b) If instead of (i.e. alternative service), please outline the extent to which the current service/comparator is expected to be substituted:

A new MBS item number is proposed to replace existing non-specific item numbers, which encompass a broad range of indications of which SLNBx for melanoma is just one.

42. Define and summarise how current clinical management pathways (from the point of service delivery onwards) are expected to change as a consequence of introducing the proposed medical service, including variation in health care resources (Refer to Question 39 as baseline):

The pathways are already in existence and utilised with MBS numbers mentioned above.

Potentially 30% of melanoma cases within Australia would be suitable for SLNBx based on primary tumour characteristics.

PART 6d - INFORMATION ABOUT THE CLINICAL OUTCOME

43. Summarise the clinical claims for the proposed medical service against the appropriate comparator(s), in terms of consequences for health outcomes (comparative benefits and harms):

- Gives patients better prognostic information.
- Improved local disease control and in most cases with positive lymph nodes avoid a full lymph node dissection.
- Possible improved survival in lymph node positive
- Would usually be performed at the same occasion as wider excision of the primary site, so no additional admission. Likely admission duration would be day only or 23 hour stay.
- Minor morbidity from the node biopsy in 10% - seroma, infection, haematoma. Small risk of serious complications - nerve injury, lymphoedema.
- Selection tool for adjuvant treatment as listed in question 24. Sentinel lymph node biopsy patients are potentially eligible for BRAF targeted therapy and probably in the near future for immunotherapy with improved disease free survival as a result.

44. Please advise if the overall clinical claim is for:

☒ Superiority
☐ Non-inferiority

45. Below, list the key health outcomes (major and minor - prioritising major key health outcomes first) that will need to be specifically measured in assessing the clinical claim of the proposed medical service versus the comparator:

Both Safety and Clinical Effectiveness Outcomes have been very well documented in major published trials (see *Final Trial Report of Sentinel-Node Biopsy versus Nodal Observation in Melanoma* (MSLT 1) and other trials listed in question 17).

PART 7 - INFORMATION ABOUT ESTIMATED UTILISATION

46. Estimate the prevalence and/or incidence of the proposed population:

30% of new cutaneous melanoma cases each year in Australia.

Actual use would be lower, due to patient decline, patient unsuitability, etc.

47. Estimate the number of times the proposed medical service(s) would be delivered to a patient per year:

Single use for each diagnosis of melanoma.

48. How many years would the proposed medical service(s) be required for the patient?

Single use for each diagnosis of melanoma.

49. Estimate the projected number of patients who will utilise the proposed medical service(s) for the first full year:

2,500 - 3,000. This would include patients treated within the public health sector.

50. Estimate the anticipated uptake of the proposed medical service over the next three years factoring in any constraints in the health system in meeting the needs of the proposed population (such as supply and demand factors) as well as provide commentary on risk of 'leakage' to populations not targeted by the service:

As mentioned in question 38, this procedure is already widely performed but is not quantifiable. The complexity of the procedure is not recognised in the current MBS, and may be a barrier to its further use.

A SLNBx specific item number would enable accurate documentation of the prevalence of this procedure and more of the population would potentially benefit from its use.

PART 8 - COST INFORMATION

51. Indicate the likely cost of providing the proposed medical service. Where possible, please provide overall cost and breakdown:

As per 30299.

This procedure is already being performed within the MBS but cannot be identified from other indications for lymph node biopsy (30075, 30329, 30332, 31420, 31423).

The cost is commensurate with SLNBx for breast cancer (30299-30303). This is between the value of lymph node biopsy (30075) and lymph node clearance (30330, 30335, 30336, 31426, 31429, 31438, 35551).

Future costs will rise now that effective adjuvant therapy is available for node positive patients.

The cost of subsequent nodal clearances based on a positive sentinel node will decrease based on the evidence from the MSLT II trial and the DeCOG-SLT Trial.

52. Specify how long the proposed medical service typically takes to perform:

30 minutes for routine procedure, longer if there are multiple sentinel nodes, multiple nodal basins or involvement of the cervical lymph nodes or other atypical draining sites.

53. If public funding is sought through the MBS, please draft a proposed MBS item descriptor to define the population and medical service usage characteristics that would define eligibility for MBS funding.

Category 3 - Treatment of Malignant Melanoma and Locally Aggressive Skin Tumours
SENTINEL LYMPH NODE BIOPSY OR BIOPSIES for cutaneous melanoma, where the primary lesion is 1.0mm or greater in depth, and appropriate excision of the primary has occurred, using preoperative lymphoscintigraphy and lymphotropic dye injection (Anaes.) (Assist.) Fee: $637.45 The applicant would recommend: 1 the multiple procedure rule be applicable in the situation of more than one lymph node basin being demonstrated on lymphoscintography 2 if the primary tumour is greater than 0.75mm thickness with high risk pathological features, then SLNBx is still indicated