Australian Government

Department of Health

Consultation Survey on MSAC Application 1684

Genetic testing for variants associated with haematological malignancies

MSAC welcomes feedback on MSAC applications for public funding from individuals, organisations representing health professionals or consumers and/or carers, and from other stakeholders. Please use this template to prepare your feedback. You may also attach additional information if you consider it may be useful in informing MSAC and its sub-committees.

Sharing consultation feedback

Submitted consultation feedback will be shared with the Applicant and with MSAC and its sub-committees.

- The applicant will receive a summary of comments from individuals, with the individual's name and other identifying information removed.
- MSAC and its sub-committees will receive both the summary and copies of the comments, with the name of the individual and other identifying information removed.
- Consultation feedback from groups or organisations will be provided in a complete form to both the Applicant and to MSAC and its sub-committees.

Please do not include information in your feedback that you do not want shared as outlined above. In addition, to protect privacy, do not include identifying personal (e.g. name) or sensitive (e.g. medical history) information about third parties, such as medical professionals or friends/relatives.

How consultation feedback is used

MSAC and its sub-committees consider consultation feedback when appraising an application, including to better understand the potential impact of the proposed medical technology/service on consumers, carers, and health professionals. A summary of consultation feedback will be included in the Public Summary Document (PSD) published on the MSAC website once MSAC has completed its appraisal. The PSD may also cite feedback from groups/organisations, including the name of the organisation. As such, organisations should not include information or opinions in their feedback that they would not wish to see in the public domain.

Consultation deadlines. Please ensure that feedback is submitted by the pre-PASC or pre-MSAC consultation deadline for this application. Consultation deadlines for each PASC and MSAC meeting are listed in the PASC and MSAC and ESC calendars available on the MSAC website. They are also published in the MSAC Bulletin. Feedback received after the respective deadlines may not be considered.

For further information on the MSAC consultation process please refer to the MSAC Website or contact the Consumer Evidence and Engagement Unit on email: commentsMSAC@health.gov.au.
Thank you for taking the time to provide your feedback. Please return your completed survey to:

Email: commentsMSAC@health.gov.au

Mail: MSAC Secretariat,
MDP 960, GPO Box 9848,
ACT 2601

PART 1 – PERSONAL AND ORGANISATIONAL INFORMATION

1. Respondent details

Name: Michael Quinn on behalf of Australian Genomics

Email: Australian.genomics@mcri.edu.au

Phone No: 07 3646 0185

2. Is the feedback being provided on an individual basis or by a collective group?

☐ Individual
☒ Collective Group

If an individual, specify the name of the organisation you work for

If a collective group, specify the name of the group

Australian Genomics

3. How would you best identify yourself?

☐ General Practitioner
☐ Specialist
☐ Researcher
☐ Consumer
☐ Care giver
☒ Other

If other, please specify

Project officer for Australian Genomics, in consultation with senior program administrators, clinicians and researchers from Australian Genomics.

PART 2 – CLINICAL NEED AND PUBLIC HEALTH SIGNIFICANCE

4. Describe your experience with the medical condition (disease) and/or proposed intervention and/or service relating to the application form

Australian Genomics is an Australian Government initiative supporting genomic research and its translation into clinical practice. Through broad engagement and a national collaborative approach, it achieves two key objectives: to improve efficiency, reach and timeliness of genomic research projects, and to support Commonwealth, State and Territory health departments in the implementation of genomics research outcomes by refining and communicating evidence to inform policy development.

Australian Genomics engages with current and emerging government policy and priorities to identify gaps and opportunities, to support policy and action for integrating genomic technologies into the health system. By interfacing with consumers, government, industry and global genomics initiatives, Australian Genomics drives change and growth in the sector.

Australian Genomics has investigated clinical implementation of genomic testing into a range of rare disease and cancer diseases. Cancer studies have included a somatic flagship, that investigated clinically actionable variants in a range of cancer types using the Comprehensive Cancer Panel (391 cancer gene panel) at the Peter MacCallum Cancer Centre. Other studies have included investigation of genomic testing in rare inherited cancers (ICCon flagship) and in patients with Acute Lymphoblastic Leukaemia.

5. What do you see as the benefit(s) of the proposed medical service, in particular for the person involved and/or their family and carers?

Without the proposed medical service, this subset of patients would have more difficulty in obtaining a diagnosis, and therefore classification into the correct sub-categorisation of haematological malignancy. In some cases, a targeted treatment plan could be offered depending on the diagnosis thus greatly aiding in clinical management and patient outcome.

We note, as outlined in the application, that the proposed service aligns with the 2016 World Health Organization diagnostic criteria for haematological malignancies and the Australian Government Department of Health: Leukaemia Foundation's National Strategic Action Plan for Blood Cancer. Systematic genomic and genetic testing was also recommended as standard of care in the 'State of the Nation Blood Cancer in Australia Leukaemia Foundation' report (https://www.leukaemia.org.au/wp-content/uploads/2020/06/State-of-the-Nation-Blood-Cancer-in-Australia_Leukaemia-Foundation.pdf).

It is also recognized in the application that haematologic malignancy is relatively common (nine percent of all cancers diagnosed annually) with lymphoma being the most commonly diagnosed cancer in young adults, thus representing a considerable cost to the health system. For example, as outlined in the application, young adults (15-24) and children (1-14 years) were the most commonly represented age groups in Australian lymphoma and leukaemia data respectively. Early diagnosis and greater treatment options at a young age would greatly impact on patient quality of life.

Additionally, there is a considerable financial cost of blood cancers. From the 2018 Canteen study, for AML and Hodgkin lymphoma diagnosed in 2018, there would be a cost of $1.5 million and $460,000 respectively to the Australian health system (https://www.leukaemia.org.au/wp-content/uploads/2020/06/State-of-the-Nation-Blood-Cancer-in-Australia_Leukaemia-Foundation.pdf)**.** As outlined in Table 4.1 of that report, a study in lymphoma disease using a next generation sequencing panel resulted in considerable benefit cost ratios, in terms of life extension and avoidance of bone marrow transplants.

Taken together, we believe the proposed service, allowing for more accurate diagnosis and tailored treatment will provide considerable hope for respective patient's family, carers, offer stabilisation of quality of life and a decreased burden on the health system.

6. What do you see as the disadvantage(s) of the proposed medical service, in particular for the person involved and/or their family and carers?

In some cases, the causative variant will be germline and there may be implications for further family testing (for example see germline GATA2 example in response to question 41 of the application). It is important that implications for family members are clearly outlined prior to testing.

Relevant support services for patient and other family members should be available as standard of care through respective haematology/oncology services.

As noted in the application (question 44), there may be adverse events associated with treatment following molecular diagnosis.

7. What other benefits can you see from having this intervention publically funded?

Generally, there would be considerable reduction in financial burden to the family – without this intervention the treatment will not be as equitably available to Australians. Currently, only one third of haematological malignancy patients reported use of genetic or genomic testing to aid in diagnosis and treatment (see Fig 3.14 https://www.leukaemia.org.au/wp-content/uploads/2020/06/State-of-the-Nation-Blood-Cancer-in-Australia_Leukaemia-Foundation.pdf). Additionally, the report indicated that those in regional and rural areas were 7% less likely to receive a genetic or genomic test. The proposed service would greatly aid in addressing these access and equity issues.

To further reinforce the important of this test, a philanthropy funded Peter MacCallum Cancer Centre study, it was found that a 29 gene panel test of lymphoma, the testing provided clinically relevant information in 61% of lymphoma patients (https://www.leukaemia.org.au/wp-content/uploads/2020/06/State-of-the-Nation-Blood-Cancer-in-Australia_Leukaemia-Foundation.pdf).

For the subset of patients where it is ascertained that the variant is germline, there are patient management implications, reproductive health options and implications for other family members.

8. What other services do you believe need to be delivered before or after this intervention, e.g. Dietician, Pathology etc?

We understand this service will mainly be delivered through haematology / oncology services.

In some clinical situations, genetic counselling / genetic services would not be required, although we note the application states 8-15% of haematological malignancies are familial. There are some specific examples where germline mutations are well characterized (e.g. germline GATA2 mutations for myeloid neoplasms, see also question 41). Where such mutations have wide ranging clinical implications (Hsu et al., 2015), genetic services should be consulted – given the additional implications for other family members and reproductive health.

We understand it is becoming more frequent for haematology/oncology services to refer patients to genetics who have had cancer genetic testing – to investigate if the mutation was somatic or germline, with associated implications for family testing. Typically, this will involve sequencing of a hair or skin sample as a control, but further guidelines on both the clinical flow and testing process are warranted.

Hsu, A. P., L. J. McReynolds, and S. M. Holland. 2015. 'GATA2 deficiency', *Curr Opin Allergy Clin Immunol*, 15: 104-9.

PART 3 – INDICATION(S) FOR THE PROPOSED MEDICAL SERVICE AND CLINICAL CLAIM

9. Do you agree or disagree with the proposed population(s) for the proposed medical service as specified in Part 6a of the application form?

- ☐ Strongly Agree
- ☒ Agree
- ☐ Disagree
- ☐ Strongly Disagree

Specify why or why not:

The population is clearly delineated, along with a clear clinical pathway from primary health care provider to specialist, following referral. Figure 4 gives a clinical algorithm, which is further supported with relevant examples (refer to pg21, end of 6a, question 26).

It would be useful to know what proportion of patients cannot achieve a definitive diagnosis without the proposed additional genetic profiling (question 25).

10. Have all the associated interventions been adequately captured in Part 6b of the application form?

- ☒ Yes
- ☐ No

Please explain:

On pg21, we believe the application is referring to the 2016 WHO diagnostic criteria (rather than 2017).

11. Do you agree or disagree that the comparator(s) to the proposed medical service as specified in Part 6c of the application form?

- ☒ Strongly Agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly Disagree

Please explain:

The comparator of no gene panel testing is appropriate in most cases. As noted in the application, there are a number of existing MBS items relating to initial diagnosis (a range of cytology, haematology and genetics tests).

12. Do you agree or disagree with the clinical claim made for the proposed medical service as specified in Part 6d of the application form?

- ☐ Strongly Agree
- ☒ Agree
- ☐ Disagree
- ☐ Strongly Disagree

Specify why or why not:

The proposed service, offering molecular diagnosis would greatly aid in giving diagnostic certainty and a pathway to treatment in some cases. As previously noted, the service aligns with the National Strategic Action Plan for Blood Cancer.

For question 36 (a) it appears that the referral site is not listed (questions asks for ALL relevant settings to be selected) – for example inpatient/outpatient in private or public setting, also a specialist private consulting room would seem appropriate as a proposed setting.

As indicated in the response to question 44, there may be a need for subsequent investigation into adverse treatment events. Additionally, any healthcare savings could be directly measured.

PART 4 – COST INFORMATION FOR THE PROPOSED MEDICAL SERVICE

13. **Do you agree with the proposed service descriptor?** MSAC is transitioning to new application forms so the relevant question in the application form will vary depending on the version used. For medical services on the MBS, see question 51 or 53. For medical services seeking funding from a source other than the MBS, see question 52 (new application forms only—labelled v. 2.5).

- ☐ Strongly Agree
- ☒ Agree
- ☐ Disagree
- ☐ Strongly Disagree

Specify why or why not:

We agree generally with the service descriptor, noting that the test would be requested by a haematologist or oncology specialist. We also note that the time to result of the test is an important parameter (2-4 weeks is stated) – allowing diagnosis or a clinical treatment plan would have high clinical urgency for aggressive and/or late stage haematological malignancies.

The application noted a proviso should be present for a second unrelated disease – this should be covered in the wording "Applicable once per diagnostic episode".

14. **Do you agree with the proposed service fee?** MSAC is transitioning to new application forms, so the relevant question in the application form will vary depending on the version used. For medical services on the MBS, see question 51 or 53. For medical services seeking funding from a source other than the MBS, see question 52 (new application forms only—labelled v. 2.5).

- ☐ Strongly Agree
- ☒ Agree
- ☐ Disagree
- ☐ Strongly Disagree

Specify why or why not:

As noted above, the time of testing is an important parameter – we note that a faster turnaround time may affect costings.

PART 5 – ADDITIONAL COMMENTS

15. Do you have any additional comments on the proposed intervention and/or medical condition (disease) relating to the proposed medical service?

This is a comprehensive and well-balanced proposal, which will greatly increase accessibility of genetic testing for haematological malignancies, and lead to greater accuracy in molecular diagnosis and clinical treatment options.

The service will align well with both the 2016 WHO revision of classification and the Australian Government Department of Health National Strategic Action Plan for Blood Cancer. We also note considerable patient advocacy support.

As a final point – this service is an important step in genetic testing of haematological malignancies, and will offer a sound position for future technological advancements in this area. This may include RNAseq technology of fusion gene discovery, circulating tumour derived DNA (particularly for myeloid neoplasms) and single cell DNA sequencing technology.

16. Do you have any comments on this feedback survey? Please provide comments or suggestions on how this process could be improved.

We suggest better alignment of the structure of the application with the feedback survey – we understand that the process is currently under review and look forward to being able to submit more targeted feedback more easily in future.

Again, thank you for taking the time to provide valuable feedback.