



Australian Government

Medical Services Advisory Committee

Public Summary Document

Application No. 1554 – Amendment to MBS item 73295 to allow testing for somatic BRCA mutation to allow patient access to first-line maintenance treatment with olaparib

Applicant: AstraZeneca Pty Ltd

Date of MSAC consideration: MSAC 79th Meeting, 28-29 July 2020

Context for decision: MSAC makes its advice in accordance with its Terms of Reference, [visit the MSAC website](#)

1. Purpose of application

An application for a streamlined codependent consideration requested:

- an extension of the Pharmaceutical Benefits Schedule (PBS) listing of olaparib (Lynparza) to include newly diagnosed advanced BRCA-mutated high grade epithelial ovarian, fallopian tube or primary peritoneal cancer in response (complete or partial) to first-line platinum-based chemotherapy
- an amendment of Medicare Benefits Schedule (MBS) item 73343 to include first-line tumour *BRCA1* *BRCA2* testing at diagnosis of advanced ovarian cancer.

2. MSAC's advice to the Minister

After reviewing estimates of utilisation and financial implications to the Medicare Benefits Schedule (MBS), MSAC confirmed that its November 2019 support to amend MBS item 73295 would allow testing for somatic *BRCA* mutations would help determine patient access to olaparib in the first-line setting, in line with the extended Pharmaceutical Benefits Scheme (PBS) listing of olaparib as recommended by the Pharmaceutical Benefits Advisory Committee (PBAC) in July 2020.

Consumer summary

AstraZeneca Pty Ltd applied for public funding through the Medicare Benefits Schedule (MBS) for testing BRCA (BRCA1 and 2) genes for mutations in a sample of tumour tissue. This application was for testing in people with advanced, high-grade/fast-growing ovarian cancer or fallopian tube cancer or primary cancer in the peritoneum (the tissue that lines the cavity of the abdomen).

Olaparib is a medicine for these advanced, high-grade/fast growing cancers. Olaparib is likely to be more clinically effective for people who have a mutation in their BRCA1 or BRCA2 genes. Genetic testing is the only way to find out if someone has a gene mutation.

Consumer summary

MSAC had considered this application in November 2019, and supported public funding for BRCA1 or BRCA2 testing in a sample of tumour tissue from a person with one of these advanced, high-grade/fast growing cancers whose cancer has come back (relapsed) after initial response to treatment. This decision was consistent with the existing Pharmaceutical Benefits Scheme (PBS) listing of olaparib: at that time, the Pharmaceutical Benefits Advisory Committee (PBAC) had decided not to recommend an extension of the PBS listing of olaparib to include patients who have been diagnosed with one of these advanced, high-grade/fast growing cancers for the first time and are responding to initial treatment.

In July 2020, the PBAC recommended olaparib for newly diagnosed patients.

MSAC's advice to the Commonwealth Minister for Health

MSAC confirmed its previously supported changes to the MBS would allow genetic testing for patients with newly diagnosed advanced, high-grade/fast growing cancer to help decide whether they are in the group of people who might derive greater clinical benefit from olaparib.

3. Summary of consideration and rationale for MSAC's advice

MSAC noted that the July 2020 PBAC meeting recommended olaparib for newly diagnosed advanced *BRCA*-mutated high-grade epithelial ovarian, fallopian tube or primary peritoneal cancer for patients who are in response to first-line platinum-based chemotherapy. The PBAC recommendation also relies on proposed amendments to MBS item 73295, and new MBS items 73301 and 73302.

MSAC noted that amendments to MBS item 73295 and two new MBS items (73301 and 73302) resulting from MSAC's November 2019 consideration of Application 1554 will be implemented on 1 August 2020.

MSAC confirmed the proposed item descriptors were also suitable to accommodate *BRCA* testing for the first-line patient population.

MSAC noted the utilisation estimates and impacts on the MBS presented by the applicant for testing and treatment of patients in the first-line setting. The applicant predicted a decrease in services for existing germline *BRCA* testing items such as 73295 and 73296, when tumour testing is made available on 1 August 2020. The applicant predicted that extending eligibility for olaparib to newly diagnosed patients will result in increased utilisation of the new tumour testing item 73301, with estimated utilisation of **redacted** patients in year 1. MSAC considered these estimates to be acceptable.

4. Background

At its November 2019 meeting, MSAC supported the modification of existing MBS item 73295 and the creation of two new MBS items to fund somatic *BRCA* testing to help identify additional patients as eligible for PBS-subsidised olaparib beyond its existing second-line restriction ([MSAC Application 1554 Public Summary Document \[PSD\] 2019](#), p1).

Germline *BRCA1* or *BRCA2* testing to determine eligibility for olaparib maintenance therapy in patients with platinum sensitive, relapsed HGSOC was listed on the MBS (MBS item 73295) alongside PBS listings for olaparib (PBS items 11034R and 11050N) since 1 February 2017. Subsequently, germline gene mutation testing, including *BRCA1* and

BRCA2 testing, at diagnosis of ovarian cancer in patients at >10% risk of having a pathogenic gene mutation, became available on the MBS from 1 November 2017 (MBS item 73296).

5. Prerequisites to implementation of any funding advice

This was unchanged; refer to [MSAC Application 1554 PSD 2019](#), pp6-7.

6. Proposal for public funding

The application proposed a minor amendment to the MBS item descriptor for item 73295 (Table 1). The applicant considered that the proposed wording to the descriptor was revised for consistency and aligned with the existing MBS item numbers: 73295, 73296, 73297. The applicant also noted that, in MBS item YYYYYY, reference to MBS item XXXXX was removed. The applicant's reason was that patients currently with a positive tumour *BRCA* test are eligible for this future service.

Table 1 Applicant's proposed draft MBS item descriptors

MBS item 73295	
Detection of germline <i>BRCA1</i> or <i>BRCA2</i> gene mutations, in a patient with advanced (FIGO III-IV) high-grade serous or high-grade epithelial ovarian, fallopian tube or primary peritoneal cancer for whom testing of tumour tissue is not feasible, requested by a specialist or consultant physician, to determine eligibility for olaparib under the Pharmaceutical Benefits Scheme (PBS).	
Maximum one test per lifetime	
Fee: \$1200.00	
MBS item XXXXX	Group P7 – Genetics
A test of tumour tissue in a patient with advanced (FIGO III-IV) high grade serous or high grade epithelial ovarian, fallopian tube or primary peritoneal cancer requested by a specialist or consultant physician, to determine eligibility relating to <i>BRCA1 BRCA2</i> mutation status for access to olaparib under the Pharmaceutical Benefits Scheme (PBS).	
Once per primary tumour diagnosis	
Fee: \$1200.00	
MBS item YYYYYY	Group P7 – Genetics
Characterisation of germline <i>BRCA1</i> and <i>BRCA2</i> gene mutations including copy number variants, as requested by a specialist or consultant physician in a patient who has had a pathogenic (Class 5) or likely pathogenic (Class 4) mutation identified by tumour <i>BRCA1 BRCA2</i> testing and has not previously received a service under item 73296.	
Maximum one test per lifetime	
Fee: \$400.00	
Explanatory notes	
Patients who are found to have a pathogenic or likely pathogenic variant in <i>BRCA1</i> or <i>BRCA2</i> should be referred for post-test genetic counselling as there may be implications for other family members. Appropriate genetic counselling should be provided to the patient either by the specialist treating practitioner, a genetic counselling service or a clinical geneticist.	

Source: p6 of Minor Submission

The applicant noted that the suggested changes made by MSAC to the MBS descriptors allows for tumour *BRCA* testing to occur agnostic to line of therapy.

7. Proposed intervention's place in clinical management

The application proposed that *BRCA* mutation testing of tumour tissue be conducted in patients newly diagnosed with advanced (FIGO Stage III-IV) high grade epithelial ovarian, fallopian tube or primary peritoneal cancer rather than patients with platinum sensitive relapsed high grade serous ovarian cancer (HGSOC), therefore at the point of this diagnosis rather than after recurrence of the disease as per the current MBS item 73295.

8. Comparative effectiveness

BRCA mutation testing in SOLO1

The application stated that germline *BRCA* testing conducted for SOLO1 by Myriad was performed either using their CLIA-based assay, the Myriad Integrated BRCA Analysis[®] test or the Myriad BRCA Analysis CDX[®] test. The Myriad test uses Sanger sequencing, considered the reference standard in the application. Germline *BRCAm* testing offered by several Australian pathology providers use either Sanger sequencing or next generation sequencing (NGS)-based methods.

The application considered that close concordance between NGS-methods and Sanger sequencing was previously demonstrated in the platinum sensitive relapse HGSOC submission in 2016 (see [MSAC Application 1380 PSD 2016](#)). Central tumour *BRCAm* testing was performed by Foundation Medicine Inc. via the FoundationOne CDx Clinical trial Assay using NGS methodology.

The application recalled that, for the November 2019 consideration of MSAC Application 1554, it presented comparative diagnostic accuracy and/or concordance of NGS-based tumour testing for detection of *BRCA1/2* mutations, compared to reference standards such as polymerase chain reaction (PCR)/Sanger sequencing and/or matched germline *BRCA1/2* mutation testing. The application considered that these studies reported a high level of diagnostic accuracy (sensitivity 95-100%; specificity 97.3-100%).

The application also considered that the November 2019 consideration of MSAC Application 1554 confirmed that *BRCA* tumour testing is sufficiently accurate to identify all patients with a confirmed pathogenic *BRCA* mutation who would benefit from olaparib treatment, including patients with a germline mutation that would otherwise have been identified by the currently funded germline *BRCA* test. Furthermore, the application stated that additional *BRCA* mutant variants were frequently detected by tumour testing, indicating somatic mutations that are not detected by the currently funded tests. Consequently, more patients with a *BRCA* mutation would be detected by tumour testing, leading to more equitable access to olaparib for patients with advanced, high grade epithelial ovarian, fallopian tube or primary peritoneal cancer.

9. Financial/budgetary impacts

The application presented the financial impact of *BRCA* tumour testing, as was presented in the PBAC application for consideration at the July 2020 meeting.

Table 2 Estimated extent of use of tumour *BRC*Am testing and financial implications

-	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number of patients tested with tumour OR germline <i>BRC</i> Am testing	redacted	redacted	redacted	redacted	redacted	redacted
Tumour <i>BRC</i> A test	redacted	redacted	redacted	redacted	redacted	redacted
Germline <i>BRC</i> A test (MBS item #73295)	redacted	redacted	redacted	redacted	redacted	redacted
Familial risk > 10% (MBS item #73296)	redacted	redacted	redacted	redacted	redacted	redacted
Cost to the MBS (85%)	\$redacted	\$redacted	\$redacted	\$redacted	\$redacted	\$redacted
Number of patients no longer tested with germline <i>BRC</i> Am test from second-line	redacted	redacted	redacted	redacted	redacted	redacted
Saving to MBS	\$redacted	\$redacted	\$redacted	\$redacted	\$redacted	\$redacted
Net cost to the MBS	\$redacted	\$redacted	\$redacted	\$redacted	\$redacted	\$redacted

Source: Table 1, p3 of Minor Submission

Note, based on 85% MBS rebate

10. Applicant comments on MSAC's Public Summary Document

The Applicant had no comment.

11. Further information on MSAC

MSAC Terms of Reference and other information are available on the MSAC Website:

[visit the MSAC website](#)