

MSAC Application 1507.1

Germline *BRCA* mutation testing in patients with locally advanced or metastatic HER2-negative breast cancer to determine eligibility for PBS-listed olaparib treatment

Application for MBS eligible service or health technology

MSAC Application Number

1507.1

Application title:

Germline BRCA mutation testing to determine eligibility for olaparib treatment in patients with locally advanced or metastatic HER2 negative breast cancer (either hormone receptor positive or triple negative).

Submitting organisation:

ASTRAZENECA PTY LTD

Submitting organisation ABN:

54009682311

Application description

Succinct description of the medical condition/s:

In women, breast cancer is the most frequently diagnosed malignancy and the leading cause of cancer mortality worldwide (GLOBOCAN 2018, NCCN 2019). Advanced breast cancer (ABC) comprises both locally advanced (inoperable) and metastatic disease. Although it can be treated, metastatic breast cancer remains incurable with a median survival of approximately 3 years and a 5-year survival rate of around 25% (Cardoso et al 2018). A personal history of breast cancer or family history are continuing risk factors with approximately 5 to 10% of breast cancers due to a strong family history or genetic mutation; such as in BRCA1 or BRCA2 gene. Women with a BRCA1 or BRCA2 mutation are believed to have an intermediate risk of developing breast cancer, The average cumulative risks of developing breast cancer by 70 years old has been reported as 57-65% for BRCA1 mutation carriers and 45-49% for BRCA2 mutation carriers.

Succinct description of the service or health technology:

Germline BRCA mutation testing is well established in Australia especially for familial risk assessment and more recently to determine patient eligibility for olaparib in the ovarian cancer and prostate cancer populations.

Application contact details

Are you the applicant, or are you a consultant or lobbyist acting on behalf of the applicant?

Applicant

Are you applying on behalf of an organisation, or as an individual?

Organisation

Is the applicant organisation the organisation you are representing in the HPP today?

Yes

Application details

Does the implementation of your service or health technology rely on a new listing on the Pharmaceutical Benefits Scheme (PBS) and/or the Prescribed List?

Yes

Which list/schedule will the other health technologies be listed on?

Pharmaceutical Benefits Scheme

Is the application for a new service or health technology, or an amendment to an existing listed service or health technology?

Not sure

Please select any relevant MBS items.

MBS item number	Selected reason type
73295	Other
73296	Other

What is the type of service or health technology?

Therapeutic

PICO Sets

Application PICO sets

PICO set number	PICO set name
1	Metastatic HER2-negative breast cancer (irrespective of whether estrogen receptor positive (ER+) or progesterone receptor positive (PR+) or triple negative) AND germline BRCA mutation testing

Metastatic HER2-negative breast cancer (irrespective of whether estrogen receptor positive (ER+) or progesterone receptor positive (PR+) or triple negative) AND germline BRCA mutation testing

Supporting documentation

Document type	File name(s)
Application PICO set documents	1507_BRCA_MSAC-Application-Form19Oct2017[final_redacted].docx
Reference list	1507_BRCA_MSAC-Application-Form19Oct2017[final_redacted].docx

Population

Describe the population in which the proposed health technology is intended to be used:

The population is patients with metastatic HER2-negative breast cancer (irrespective of whether estrogen receptor positive (ER+) or progesterone receptor positive (PR+) or triple negative).

Search and select the most applicable Medical condition terminology (SNOMED CT):

Metastatic carcinoma to breast

Intervention

Name of the proposed health technology:

Germline BRCA mutation testing

Comparator

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). This includes identifying health care resources that are needed to be delivered at the same time as the comparator service:

No testing

Outcomes

Outcome description – please include information about whether a change in patient management, or prognosis, occurs as a result of the test information:

From PASC 1507 outcome 2017

PASC confirmed the following test outcomes:

- Analytical performance: sensitivity, specificity, negative predictive value, positive predictive value
- Concordance across commercially available gBRCA1/2m platforms and assays
- Re-testing rates

PASC noted the following health outcomes

- Overall survival
- Progression-free survival (according to RECIST criteria)
- PFS2/death (potential outcome)
- Health-related quality of life (HRQoL)
- Toxicity/treatment-related adverse events (potential outcome)

Clinical management algorithms

PASC requested changing the clinical practice algorithms to reflect the eligible population for testing as confirmed above, ie the eligibility criteria of the Olympiad AD trial. For example, the algorithm should reflect the possibility that the taxane or anthracycline therapy could have been received in the adjuvant or neoadjuvant setting rather than necessarily in the metastatic setting. PASC also requested changing the proposed clinical management algorithm to reflect the earlier time of gBRCAm testing of patients with metastatic breast cancer to be alongside when first-line chemotherapy or endocrine therapy is initiated in this setting.

PASC also suggested adding a footnote to the algorithms stating that the hormone therapy options may change in the future to reflect the uptake of CDK inhibitors for the treatment of hormone positive, HER2-negative metastatic breast cancer.

Proposed MBS items

Proposed Item AAAAA

MBS item number:

Please search and select the proposed category:

PATHOLOGY SERVICES

Please search and select the proposed group:

GENETICS

Please search and select the proposed item descriptor or draft a proposed item descriptor to define the population and health technology usage characteristics that would define eligibility for funding:

Detection of germline BRCA1 or BRCA2 gene mutations, in a patient with human epidermal growth factor 2 (HER2) negative metastatic breast cancer requested by a specialist or consultant physician, to determine whether eligibility criteria for olaparib under the Pharmaceutical Benefits Scheme (PBS) are fulfilled.

Maximum one test per lifetime

Proposed MBS fee:

\$1,000.00

Indicate the overall cost per patient of providing the proposed health technology:

\$1,000.00

Please specify any anticipated out of pocket costs:

\$0.00

Provide details and explain:

The cost of MBS item 73295 (germline BRCA test) and MBS item 73301 (tumour tissue test) are both \$1,200. Whereas the cost of MBS item 73304 (germline BRCA test) and MBS item 73303 (tumour tissue test) are both \$1,000. AZ believes the germline test cost should align to a schedule fee of \$1,000 and the tumour tissue test should align to a schedule fee of \$1,200. The difference in cost is reflective of the different process for collecting samples for testing i.e., a blood sample for a germline BRCA mutation test is more readily collected compared to a tumour tissue sample needed for the tumour tissue BRCA mutation test.

How is the technology/service funded at present? (For example: research funding; State-based funding; self-funded by patients; no funding or payments):

Under MBS item 73296 patients with a high risk of having a pathogenic or likely pathogenic gene such as a BRCA1 or BRCA2 genes associated with breast, ovarian, fallopian tube or primary cancer may be eligible to undergo germline BRCA mutation testing.

Please provide a cost break down attachment:

Document type	File name(s)
Cost breakdown attachment	Cost breakdown similar to current germline BRCA test reimbursed under MBS item 73296.docx

Claims

In terms of health outcomes (comparative benefits and harms), is the proposed technology claimed to be superior, non-inferior or inferior to the comparator(s)?

Superior

Please state what the overall claim is, and provide a rationale:

The overall clinical claim is that the proposed co-dependent technologies (germline BRCA mutation testing and olaparib) are superior in terms of comparative effectiveness versus the main comparator (i.e. no testing with the standard care single agent chemotherapy) in patients who harbour a gBRCA mutation with locally advanced or metastatic HER2- breast cancer which are hormone receptor positive, or triple negative and had no prior chemotherapy in the metastatic setting.

The clinical trial which supports this claim is the OLYMPIAD trial. The pivotal clinical study, OlympiAD is a randomised, open-label, phase 3 trial in which olaparib monotherapy was compared with 'standard therapy' in patients with a gBRCA mutation and HER2 negative (either hormone receptor positive or triple negative) breast cancer. Patients must also have received no more than two previous chemotherapy regimens for metastatic breast cancer.

Estimated utilisation

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

The proposed population includes both the HR+/HER- and Triple negative breast cancer populations.

Please refer to the attached spreadsheet for incidence and utilisation estimates. A detailed utilisation analysis with references to the estimates and assumptions will be presented in the streamlined co-dependent MSAC/PBAC submission in March 2024.

Provide the percentage uptake of the proposed health technology by the proposed population:

Year 1 estimated uptake(%):

65

Year 2 estimated uptake(%):

75

Year 3 estimated uptake(%):

80

Year 3 estimated uptake(%):

90

Estimate the number of patients who will utilise the proposed technology for the first full year:

814

Optionally, provide details:

A small proportion of breast cancer patients in the early setting will have a known germline BRCA status and will not require testing.

Will the technology be needed more than once per patient?

No, once only

Provide references to support these calculations.

Document type	File name(s)
Estimated utilisation references	G BRCA test Utilisation.xlsx

Consultation

List all appropriate professional bodies / organisations representing the group(s) of health professionals who provide the health technology/service:

Professional body name:

THE ROYAL COLLEGE OF PATHOLOGISTS OF AUSTRALASIA

List all appropriate professional bodies / organisations representing the group(s) of health professionals that may be impacted by the health technology/service:

Professional body name:

Medical Oncology Group of Australia

List the patient and consumer advocacy organisations or individuals relevant to the proposed health technology:

Number of organisations listed: 1

Professional body name:

Breast Cancer Network Australia

List the relevant sponsor(s) and / or manufacturer(s) who produce similar products relevant to the proposed service or health technology:

Regulatory information

Would the proposed health technology involve the use of a medical device, in-vitro diagnostic test, radioactive tracer or any other type of therapeutic good?

Yes

Has it been listed or registered or included in the Australian Register of Therapeutic Goods (ARTG) by the Therapeutic Goods Administration (TGA)?

Yes

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

Class III

Please enter all relevant ARTG IDs:

ARTG ID	ARTG name
288613	LYNPARZA olaparib 100 mg film coated tablet blister pack
288614	LYNPARZA olaparib 150 mg film coated tablet blister pack

Is the intended purpose in this application the same as the intended purpose of the ARTG listing(s)?

Yes

Codependent details

Will a submission be made to the Pharmaceutical Benefits Advisory Committee (PBAC)?

Yes

Please provide a rationale for the codependency and indicate how the proposed PBS restriction would reference the intervention(s) proposed for MSAC consideration:

The co-dependent submission requests public funding for germline BRCA mutation testing to determine eligibility of olaparib treatment in patients with locally advanced or metastatic HER2 negative breast cancer (which are either hormone receptor positive or triple negative). It is proposed that only patients who are germline BRCA mutation positive and have received no prior chemotherapy will be eligible for olaparib treatment.