# Medical Services Advisory Committee (MSAC) Public Summary Document

## *Application No. 1765 – Amendment of MBS items 73303 and 73304 (BRCA1/2 mutation testing in patients with metastatic castration-resistant prostate cancer) to include talazoparib*

**Applicant:** **Pfizer Australia PTY LTD**

**Date of MSAC consideration:** **4-5 April 2024**

Context for decision: MSAC makes its advice in accordance with its Terms of Reference, visit the MSAC website

## 1. Purpose of application

The streamlined codependent submission requested:

- An amendment of existing Medicare Benefits Schedule (MBS) items 73303 and 73304 for somatic and germline BReast CAncer gene (*BRCA) 1* and *2* testing to determine eligibility for access to olaparib under the Pharmaceutical Benefits Scheme (PBS) to include talazoparib in patients with metastatic castration-resistant prostate cancer (mCRPC).
- PBS listing of talazoparib in combination with enzalutamide for the first-line treatment of adult patients with mCRPC who have evidence of pathogenic *BRCA1/2* gene mutations and who have not received prior treatment with a novel hormonal agent (NHA).

## 2. MSAC's advice to the Minister

After considering the strength of the available evidence in relation to comparative safety, clinical effectiveness, cost-effectiveness and total cost, MSAC supported the amendment of existing Medicare Benefits Schedule (MBS) items 73303 and 73304 for breast cancer gene (*BRCA) 1/2* mutation testing to determine eligibility for a relevant treatment on the Pharmaceutical Benefits Scheme (PBS) in patients with metastatic castration-resistant prostate cancer (mCRPC).

MSAC recalled it had previously considered the *BRCA* test to be safe, effective, and cost-effective and supported its MBS listing to determine eligibility for olaparib treatment on the PBS, with the subsequent creation of two new MBS items (73303, 73304). MSAC noted the applicant's claim that the inclusion of talazoparib within the current wording of the MBS items would not alter the cost or utilisation of these two services. MSAC considered it unlikely that the number of patients eligible for testing would exceed the original utilisation estimates for items 73303 and 73304. MSAC noted that PBAC had not recommended the proposed listing for talazoparib in its March 2024 meeting but was scheduled to reconsider the submission in July 2024. In this context, MSAC considered a few alternative revisions of wording and decided to support the amendment of the MBS items to "eligibility for a relevant treatment on the PBS," after consultation with departmental medical and policy advisors (Table 1).

**Table 1 Amendment of MBS items 73303 and 73304**

| **73303** |
|---|
| A test of tumour tissue from a patient with metastatic castration-resistant prostate cancer, including subsequent characterisation of germline gene variants should tumour tissue testing undertaken during the same service be inconclusive, requested by a specialist or consultant physician, to determine eligibility relating to BRCA status for access to ~~olaparib~~ *a relevant treatment* under the Pharmaceutical Benefits Scheme.<br>Applicable once per primary tumour diagnosis |
| Fee: $1,000.00 Benefit: 75% = $750.00 85% = $906.80 |
| **73304** |
| Detection of germline BRCA1 or BRCA2 pathogenic or likely pathogenic gene variants, in a patient with metastatic castration-resistant prostate cancer, for whom testing of tumour tissue is not clinically feasible, requested by a specialist or consultant physician, to determine eligibility for ~~olaparib~~ *a relevant treatment* under the Pharmaceutical Benefits Scheme.<br>Applicable once per lifetime |
| Fee: $1,000.00 Benefit: 75% = $750.00 85% = $906.80 |

## Consumer summary

This is an application from Pfizer Australia requesting changes to existing Medicare Benefits Schedule (MBS) listings for testing of the *BRCA1 and BRCA2* genes to identify variants (mutations) in these genes in people with metastatic castration-resistant prostate cancer. People with *BRCA1* or *BRCA2* variants are likely to respond to a class of drugs known as PARP inhibitors. Currently, the listings allow access to a drug called olaparib on the Pharmaceutical Benefits Scheme (PBS). This application is requesting that another drug, called talazoparib, be added to the MBS listing.

Metastatic castration-resistant prostate cancer is prostate cancer that has spread to other areas of the body and is not responding to hormone therapy. Genetic testing involves sending a piece of the tumour to a laboratory for *BRCA1/2* testing. Currently, if the condition has progressed following prior treatment with a novel hormonal agent and the tumour is positive for a *BRCA1/2* pathogenic or likely pathogenic variant, the person can access olaparib, which is shown to improve survival in people with this type of prostate cancer and who have *BRCA1/2* variants. Both talazoparib and olaparib belong to the same class of drugs called poly(adenosine diphosphate-ribose) polymerase (PARP) inhibitors.

MSAC had already considered the genetic test to be safe, effective and value for money when it considered the application to access olaparib in 2021. MSAC considered that adding a drug to the MBS descriptor would unlikely change these conclusions.

MSAC supported the proposed MBS listing and recommended the removal of reference to individual drugs in the MBS item descriptor. The rationale is to facilitate testing and therefore patient access for a relevant drug demonstrated in the future to be beneficial to people with the condition, without having MSAC to review every application. MSAC would continue to review applications for different tests.

MSAC noted the Pharmaceutical Benefits Advisory Committee did not support the proposed PBS listing for talazoparib at its March 2024 meeting but is scheduled to reconsider the submission in July 2024.

## MSAC's advice to the Commonwealth Minister for Health and Aged Care

MSAC considered the genetic test to be safe, effective and cost-effective, and supported the amendment of the MBS items to facilitate testing so that people with metastatic castration-resistant prostate cancer and *BRCA1/2* mutation positive tumours can access a relevant treatment on the PBS.

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

MSAC noted that this minor submission requested an amendment of existing MBS items 73303 and 73304 for *BRCA1/2* testing to determine eligibility for access to olaparib under the PBS to include talazoparib in patients with mCRPC. This streamlined co-dependent submission also requested a PBS listing for talazoparib, in combination with enzalutamide, for the first-line treatment of adult patients with mCRPC who have evidence of *BRCA1/2* gene mutations and who have not received prior treatment with a novel hormonal agent (NHA).

MSAC recalled it had previously considered the *BRCA* gene test to be safe, effective, and cost-effective and supported its MBS listing to determine eligibility for olaparib treatment on the PBS, with the subsequent creation of two new MBS items (73303, 73304) (p3, PSD for MSAC application 1618, November 2021 MSAC meeting).

MSAC noted the applicant's claim that the inclusion of talazoparib within the current wording of the MBS items would not alter the cost or utilisation of these two services. One submission to the public consultation suggested that the proposed amendment would result in increased testing and genetic service referrals because of increased awareness by oncologists of treatment options. MSAC, however, noted that the statement was not supported by any evidence provided. While talazoparib and olaparib are both PARP inhibitors, MSAC noted a difference in the proposed use of talazoparib on the PBS and the current PBS-listed indication for olaparib in mCRPC. To be eligible for talazoparib, patients must not have received prior treatment with a novel hormonal agent (NHA) whereas access to PBS-subsidised olaparib requires patients to have progressed following prior treatment that included an NHA for mCRPC.During the 2023 calendar year, 1,240 services were requested under MBS item 73303 and 442 services under MBS item 73304. MSAC noted that the services claimed were fewer than the estimates reported in MSAC 1618 PSD for olaparib. The current minor submission estimated that approximately 2,278 newly diagnosed patients with mCRPC could be eligible for the test in 2024 but considered it unlikely that all eligible patients would take up the testing. Overall, MSAC considered it unlikely that the number of patients eligible for the proposed testing would exceed the original utilisation estimates for items 73303 and 73304.

MSAC noted that PBAC did not recommend the proposed listing for talazoparib in its March 2024 meeting but was scheduled to reconsider the submission in July 2024. MSAC noted a public consultation submission which suggested amending the MBS item descriptors to not include individual drug names to futureproof the item. MSAC was also mindful that several co-dependent applications have been going through the health technology assessment process to seek public subsidy for tests to access a relevant treatment on the PBS. In this context, MSAC considered a few alternative revisions of wording. In the context of the whole MBS item descriptor and the relevant PBS item descriptor, MSAC was confident that inappropriate use would be limited. MSAC decided to support the amendment of the MBS items to "eligibility for a relevant treatment on the PBS," after consultation with departmental medical and policy advisors. The rationale was to facilitate testing and therefore patient access for a relevant drug demonstrated in the future to be beneficial to people with mCRPC and *BRCA1/2* mutation tumours, without going through the MSAC evaluation process. A full health technology assessment would still be required when public subsidy is sought for a different test.

# 4. Background

MSAC had previously considered a similar codependent application for the detection of *BRCA1/2* variants to determine eligibility for treatment with olaparib in its March-April and November 2021 meetings. MSAC determined that the test was safe, effective, and cost-effective and supported

the requested MBS listing (p6, PSD for Application 1618, November 2021 MSAC meeting). Subsequently 2 new MBS items (73303, 73304) for tumour (somatic) and germline testing were created (available from 1 April 2022). Patients with mCRPC have access to MBS-funded genetic testing to detect both somatic and/or germline *BRCA1/2* gene variants, to determine eligibility for the PBS-listed olaparib therapy.

Talazoparib is an inhibitor of 2 PARP enzymes, PARP1 and PARP2. inhibitors, PARP enzymes are involved in cellular DNA damage response signalling pathways such as DNA repair, gene transcription, and cell death. PARP inhibitors exert cytotoxic effects on cancer cells by 2 mechanisms, inhibition of PARP catalytic activity and by PARP trapping, whereby PARP protein bound to a PARP inhibitor does not readily dissociate from a DNA lesion, thus preventing DNA repair, replication, and transcription, thereby resulting in apoptosis and/or cell death. Cancer cells with pathogenic *BRCA1/2* gene mutations are unable to repair DNA errors and rely on PARP enzymes for DNA repair. Therefore, PARP inhibitors such as talazoparib effectively kill tumours defective in the *BRCA1/2* genes through the concept of synthetic lethality. The applicant reported that the introduction of PARP inhibitors in mCRPC was a breakthrough in fighting this difficult-to-treat disease.

# 5. Prerequisites to implementation of any funding advice

The applicant reported that all laboratories that perform *BRCA* testing are accredited to the Royal College of Pathologist of Australasia (RCPA) Quality Assurance Programs. MSAC in its previous assessment of application 1618 had noted that, in addition, there were four National Association of Testing Authorities (NATA) accredited laboratories providing locally validated TGA notified Class 3 in-vitro diagnostic medical devices (IVD) homologous recombination repair (HRR) tumour panel testing covering *BRCA1* and *BRCA2*, with another 4 laboratories in the process of validating their assays and obtaining accreditation (p5, PSD for Application 1618, November 2021 MSAC meeting).

Talazoparib is currently undergoing parallel TGA and PBAC evaluations. PBAC did not recommend the proposed PBS listing for talazoparib in its March 2024 meeting but was scheduled to reconsider the submission in July 2024.

# 6. Proposal for public funding

*BRCA1/2* mutations may be either germline, meaning the mutation originated in the germ cells of a parent and was inherited, or somatic. Somatic mutations may occur at any time after conception in any of the cells of the body except for germ cells. Germline and tumour (somatic) *BRCA1/2* mutation testing is currently funded in Australia under MBS item numbers 73303 and 73304 to determine mCRPC patient eligibility for treatment with olaparib monotherapy on the PBS.

Table 2 presents the requested amendment to MBS items 73303 and 73304. The proposed additions are *italicised*. The applicant reported that the proposed addition of talazoparib would not result in a change to testing methodology, the patient population who access testing through the MBS, the utilisation of these two services or the current MBS fee.

**Table 2 Proposed amendments to MBS items 73303 and 73304 in the application**

| |
|---|
| **73303** |
| A test of tumour tissue from a patient with metastatic castration-resistant prostate cancer, including subsequent characterisation of germline gene variants should tumour tissue testing undertaken during the same service be inconclusive, requested by a specialist or consultant physician, to determine eligibility relating to BRCA status for access to olaparib *or talazoparib* under the Pharmaceutical Benefits Scheme.<br>Applicable once per primary tumour diagnosis |
| Fee: $1,000.00 Benefit: 75% = $750.00 85% = $906.80 |
| **73304** |
| Detection of germline BRCA1 or BRCA2 pathogenic or likely pathogenic gene variants, in a patient with metastatic castration-resistant prostate cancer, for whom testing of tumour tissue is not clinically feasible, requested by a specialist or consultant physician, to determine eligibility for olaparib *or talazoparib* under the Pharmaceutical Benefits Scheme.<br>Applicable once per lifetime |
| Fee: $1,000.00 Benefit: 75% = $750.00 85% = $906.80 |

Source: MSAC Application 1765 – Proposed amendment of MBS items in the application (proposed addition of wording in *italics*).

MSAC supported the amendment of the MBS items to "eligibility for a relevant treatment on the PBS," after consultation with departmental medical and policy advisors (Table 1).

# 7. Population

The applicant reported that the target PBS population to be treated with talazoparib was adult patients with mCRPC with evidence of pathogenic *BRCA1/2* gene alterations and who have not been previously treated with an NHA.

The minor MSAC submission did not explicitly state the proposed population eligible for testing although provided eligible patient estimates based on the number of new diagnoses of mCRPC (Table 5). The submission also reported that eviQ consensus statement for prostate cancer panel testing recommend *BRCA* testing in patients with prostate cancer and ≥ 10% probability of detecting a *BRCA1* or *BRCA2* gene variant using a validated pathogenic variant prediction tool.

# 8. Comparator

This minor MSAC submission did not nominate any comparator for the proposed testing but reported that the PBAC submission nominated enzalutamide as the main comparator for talazoparib + enzalutamide combination therapy.

# 9. Summary of public consultation input

MSAC noted and welcomed consultation input from three (3) professional organisations.

- Public Pathology Australia
- Urological Society of Australia and New Zealand
- Australian Genomics

### Benefits

- The proposed combination therapy (talazoparib + enzalutamide) would significantly improve the oncologic outcomes of patients and take an important step towards personalising therapies by selecting those who would benefit the most.

- Provides an alternative PARP inhibitor treatment option for patients with mCRPC, noting the effectiveness of PARP inhibitors may vary with dosing and homologous recombination repair gene status.
- Improves quality of life, with clinical trial data showing talazoparib treatment lengthens progression-free survival.
- Potential overall reduction of costs of health services.
- Equity of access for all patients to have the best standard of care for this condition and reduces the financial burden to patients.

Disadvantages
- Potential side effects included anaemia, neutropenia and fatigue.
- Tolerability to PARP inhibitor and enzalutamide may vary in individual patients necessitating a dose reduction.

Regarding utilisation
- There will be increased laboratory panel/gene testing, including increase in referrals to genetic services for further germline and family testing.
- The proposed service may be accessed by up to 4,844 patients annually (epidemiological estimates). Current utilisation of MBS 73303 and 73304 may provide more realistic estimates.

Regarding the proposed amendment of service descriptor to MBS 73303 and 73304:
- Novel hormone agents are increasingly being used in the metastatic setting and becoming the standard of care and provision should be made for allowing the use of novel hormone agents in the metastatic hormone-sensitive prostate cancer setting.
- The need to do biopsies to obtain tissue samples puts a strain on the healthcare system and subjecting patients to a procedure with additional side effects. Therefore, blood germline testing should be allowed, including the use of prior tissue.
- Consideration to be made whether the descriptor needs to provide specific drug names. As more PARP inhibitors become available, further amendments to the relevant MBS item numbers would be required. The wording may be changed to "inform eligibility to a PBS-approved PARP inhibitor."
- There are several MBS items numbers associated with genetic testing for *BRCA1/2* gene variants for different indications and for consistency of this intervention the reimbursement should be standardised for similar genetic tests. As the costs of genetic and genomic tests decrease over time, while there may be a case for applying lower rebates to new tests, there should be a mechanism to review currently available item numbers as a continuous process.
- MBS item 72860 x 2 block retrieval costs for Anatomical Pathology would need to apply and it is difficult to easily identify previously tested mCRPC if done by interstate referral laboratories.

# 10. Characteristics of the evidence base

This minor MSAC submission did not present any assessment of the analytical performance of the genetic test, citing MSAC's previous acceptance of the comparative safety, clinical and cost-effectiveness of the genetic testing to determine eligibility for access to PBS-subsidised olaparib in patients with mCRPC (MSAC application 1618, March-April 2021 and November 2021 MSAC meetings).

The minor MSAC submission provided the clinical evidence presented in the PBAC submission considered in March 2024 PBAC meeting. The pivotal evidence was a randomised, double-blind, multinational phase III trial (TALAPRO-2) that compared talazoparib plus enzalutamide versus

placebo plus enzalutamide as first-line therapy in adult men with symptomatic or mildly symptomatic mCRPC receiving ongoing androgen deprivation therapy.

Patients were prospectively assessed for homologous recombination repair (HRR) gene alterations in tumour tissue using FoundationOne CDx.and/or FoundationOne Liquid CDx (Foundation Medicine) and randomly assigned to talazoparib or placebo, plus enzalutamide. Randomisation was stratified by HRR gene alteration status (deficient vs non-deficient or unknown) and previous treatment with life-prolonging therapy (docetaxel or abiraterone, or both: yes vs no) in the castration-sensitive setting. MSAC had previously considered FoundationOne®CDx in its consideration of application 1618 on the testing of tumour prostate tissue to detect *BRCA1/2* pathogenic gene variants in men with mCRPC to help determine eligibility for PBS olaparib.

FoundationOne®CDx (F1CDx) is a qualitative next generation sequencing based *in vitro* diagnostic test that uses targeted high throughput hybridization-based capture technology for detection of substitutions, insertion and deletion alterations (indels) and copy number alterations (CNAs) in 324 genes and select gene rearrangements, as well as genomic signatures including microsatellite instability (MSI) and tumour mutational burden using DNA isolated from formalin-fixed paraffin embedded (FFPE) tumour tissue specimens. Testing for genomic alterations included 12 HRR genes: *BRCA1, BRCA2, PALB2, ATM, ATR, CHEK2, FANCA, RAD51C, NBN, MLH1, MRE11A, CDK12*. Patients were considered HRR-deficient if they had at least 1 mutation in 1 or more of the 12 genes or if there was a discordant result between the tissue and liquid result. If prospective results from blood and tumour tissue samples were both available, a positive result from either was considered prospectively DNA damage response deficient.

The primary endpoint was radiographic progression-free survival (rPFS) by blinded independent central review (BICR), evaluated in the intention-to-treat (ITT) population. Safety was evaluated in all patients who received at least one dose of study drug.

Two cohorts were evaluated in the TALAPRO-2 trial: unselected (Cohort 1, the allcomers cohort, recruited first) and selected (Cohort 2, HRR-deficient only, which completed recruitment after completion of enrolment in Cohort 1) for DNA damage response alterations in genes directly or indirectly involved in HRR.

805 patients were enrolled in Cohort 1, of which, 636 (79.0%) were non-HRR-deficient or had unknown HRR status and 169 (21.0%) were HRR-deficient. Cohort 2 included the 169 patients from Cohort 1 who were HRR-deficient as well as an additional 230 patients enrolled directly into the cohort, for a total of 399 patients. The post hoc *BRCA1/2* subpopulation from Cohort 2 accounted for 39.6% of the overall population of Cohort 2 (HRR deficient population). The minor submission reported that concordance results between *BRCA1/2* mutation identified by blood test and ctDNA analysis was not available for Cohort 2. In Cohort 1, there were 60 (7.4%) patients that had *BRCA1/2* gene alteration.

# 11. Comparative safety

The MSAC minor submission considered MSAC had previously accepted the comparative safety of the genetic test in its consideration of application 1618 and did not present any further evidence on safety.

Table 3 presents the comparative safety data from Cohort 2 of the TALAPRO-2 trial.

**Table 3 Summary of adverse events (AEs) and dose modifications due to AEs in the TALAPRO-2 trial (Cohort 2 – ITT HRR deficient population)**

| | TAL + ENZ N = 198 | PBO + ENZ N = 199 |
|---|---|---|
| **Adverse events, n (%)** | | |
| Any adverse event | 182 (91.9) | 111 (56.1) |
| Serious TEAE | 60 (30.3) | 40 (20.1) |
| TEAE grade 3 or 4, n (%) | 131 (66.2) | 74 (37.2) |
| Grade 5 TEAE | 3 (1.5) | 5 (2.5) |
| **Dose modifications** | | |
| Dose interruption due to AEs | 114 (57.6%) | 31 (15.6%) |
| Dose reduction due to AEs | 103 (52.0%) | 12 (6.0%) |
| Discontinuation due to AEs | 20 (10.1%) | 14 (7.0%) |

Source: Tables 10-11, MSAC minor submission.
AE = adverse event; ENZ = enzalutamide; PBO = placebo; TAL = talazoparib; TEAE = treatment emergent adverse event.

# 12. Comparative effectiveness

The MSAC minor submission considered MSAC had previously accepted the comparative effectiveness of the genetic test in its consideration of application 1618 and presented only evidence on the comparative clinical effectiveness in the TALAPRO-2 trial. The submission reported 95% agreement between prospective tissue and ctDNA-based HRR mutational status using FoundationOne, consistent with the results reported in the literature. Table 4 presents the results of rPFS based on BICR assessment and overall survival (OS) for Cohort 2 in the TALAPRO-2 trial.

**Table 4 Summary of rPFS and OS in the TALAPRO-2 trial**

| | Cohort 2- ITT HRR def | | Cohort 2 – BRCA1/2 | | Cohort 2 – non-BRCA1/2 | |
|---|---|---|---|---|---|---|
| | TAL + ENZ N=200 | PBO + ENZ N=199 | TAL + ENZ N=71 | PBO + ENZ N=84 | TAL + ENZ N=127 | PBO + ENZ N=113 |
| **rPFS - BICR (IA 03 October 2022)** | | | | | | |
| Events, n (% | 66 (33.0) | 104 (52.3) | 15 (21.1) | 54 (64.3) | 50 (39.4) | 50 (44.2) |
| Median (95% CI), months | NR (21.9, NR) | 13.8 (11.0, 16.7) | NR (NR, NR) | 11.0 (8.3, 11.1) | 24.7 (16.4, NR) | 16.7 (13.8, 27.7) |
| HR (95% CI) | 0.45 (0.33, 0.61) | | 0.20 (0.11, 0.36) | | 0.69 (0.46, 1.02) | |
| One sided p-value | < 0.0001 | | < 0.0001 | | 0.0298 | |
| **OS (IA 03 October 2022)** | | | | | | |
| Events, n (%) | 43 (21.5) | 53 (26.6) | 13 (18.3) | 21 (25.0) | 29 (22.8) | 32 (28.3) |
| Median (95% CI), months | NR (36.4, NR) | 33.7 (27.6, NR) | NR (29.8, NR) | NR (24.5, NR) | 36.4 (36.4, NR) | 33.7 (27.6, NR) |
| HR (95% CI) | 0.69 (0.46, 1.03) | | 0.613 (0.306, 1.230) | | 0.664 (0.399, 1.105) | |
| One sided p-value | 0.0338 | | 0.0821 | | 0.0560 | |
| **OS (IA 28 March 2022)** | | | | | | |
| Events, n (%) | 60 (30.0) | 76 (38.2) | 18 (25.4) | 34 (40.5) | 42 (32.6) | 42 (36.6) |
| Median (95% CI), months | 41.9 (34.5, NR) | 30.8 (26.8, 38.8) | 41.9 (33.0, NR) | 26.1 (22.6, NR) | 37.3 (34.5, NR) | 33.7 (29.0, NR) |
| Difference in median OS, months | 11.1 | | 15.8 | | 3.6 | |
| HR (95% CI) | 0.665 (0.473, 0.935) | | 0.470 (0.262, 0.845) | | 0.797 (0.519, 1.224) | |
| One sided p-value | 0.0091 | | 0.0049 | | 0.1487 | |

Source: Tables 3-4, pp8 and 11 of the minor MSAC submission.
*BRCA*=breast cancer gene; CI=confidence interval; ENZ=enzalutamide; HR=hazard ratio; IA=interim analysis; ITT=intention-to-treat; NR=not reached; OS=overall survival; PBO=placebo; rPFS=radiographic progression-free survival; TAL=talazoparib.

The submission concluded that TAL + ENZ is superior in efficacy outcomes of rPFS and OS and inferior in safety, when compared to PBO + ENZ, as first-line treatment of mCRPC with *BRCA1/2* tumours.

# 13. Economic evaluation

The minor MSAC submission did not present any economic evaluation. MSAC noted the PBAC submission for talazoparib did not incorporate consideration of the cost of genetic testing in its economic evaluation or financial estimates.

# 14. Financial/budgetary impacts

The minor MSAC submission reported that testing for *BRCA1* or *BRCA2* in patients with mCRPC for access to PBS-listed olaparib is established clinical practice in Australia. Therefore, the proposed amendment of the MBS items 73303 and 73304 would not alter the cost or the utilisation of these two services, and there would be no net financial impact to the MBS (p21 of the minor MSAC submission).

Table 5 presents the estimated utilisation in the submission: approximately 2,278 newly diagnosed patients with mCRPC could be eligible for the test in 2024, based on 11.2% of patients diagnosed with prostate cancer are CRPC and 84% were metastatic disease. The applicant indicated that it is unlikely that all eligible patients would take up testing, there would

not be any supply or demand issues and the requested testing would be manageable even if the number of laboratories conducting testing does not increase. The applicant anticipated a low risk of leakage given the specific details of the proposed item descriptor.

**Table 5 Estimated utilisation in the MSAC minor submission**

| | 2024 | Reference / Source |
|---|---|---|
| Estimated number of patients diagnosed with prostate cancer [A] | 24,217 | AIHW Available at: https://www.aihw.gov.au/reports/cancer/cancer-data-in-australia/contents/cancer-summary-data-visualisation (Accessed 28 September 2023) |
| Proportion of patients with CRPC [B] | 11.2% | Kirby et al 2011 Characterising the castration-resistant prostate cancer population: a systematic review. *J Clin Pract*, 65(11), 1180-1192 |
| Estimated number of patients diagnosed with CRPC [C = A x B] | 2,712 | Calculated |
| Proportion of CRPC patients with metastatic disease [D] | 84% | Wade et al 2018. Profiling Prostate Cancer Therapeutic Resistance. *International Journal of Molecular Sciences*. 2018; 19(3):904. https://doi.org/10.3390/ijms19030904 |
| Estimated patients with mCRPC [E = C x D] | 2,278 | Calculated |
| **Sensitivity – upper bound** | | |
| Proportion of patients with mCRPC | 12.1% | De Velasco et al 2022. Incidence, prevalence, and treatment patterns in metastatic hormone-sensitive prostate cancer in Spain: ECHOS study. *Actas Urológicas Españolas* 46 (2022) 557---564 (in English) |
| Estimated number of patients with mCRPC | 2,930 | Calculated |
| **MBS utilisation data items 73303 and 73304 (financial year Jul 2022 -Jun 2023)** | | |
| Total (MBS items 73303 & 73304) | 1,599 | Medicare Item Reports – Services Australia http://medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp |
| Uptake rate- Base case | 70.2% | Calculated |
| Uptake rate – sensitivity using upper bound | 54.6% | Calculated |

Source: table in information about estimated utilisation in the application form supplied with the minor submission.
MBS = Medicare Benefits Schedule; mCRPC = metastatic castration resistant prostate cancer.

## 15. Other relevant information

None.

## 16. Applicant comments on MSAC's Public Summary Document

The applicant has no comment.

## 17. Further information on MSAC

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