Lynparza®
olaparib
tablets 150 mg

HRD Testing in Advanced Ovarian Cancer FAQs

LYNPARZA® (olaparib) in combination with bevacizumab is a first-line maintenance treatment option in select patients with newly diagnosed HRD-positive advanced ovarian cancer.*†[1]

This FAQs document will explain what HRD is, how HRD tests work, and emphasize the importance of **testing all patients for HRD at diagnosis with an FDA-approved CDx**, to identify those eligible for therapy with LYNPARZA plus bevacizumab.

Select to view.

*HRD-positive is defined as either a deleterious or suspected deleterious tumor *BRCA* mutation and/or an HRD score ≥42 by Myriad MyChoice® CDx.[2,3]

†Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA.[1]

CDx, companion diagnostic; FDA, US Food and Drug Administration; HRD, homologous recombination deficiency.

Select to view Indications and Important Safety Information.

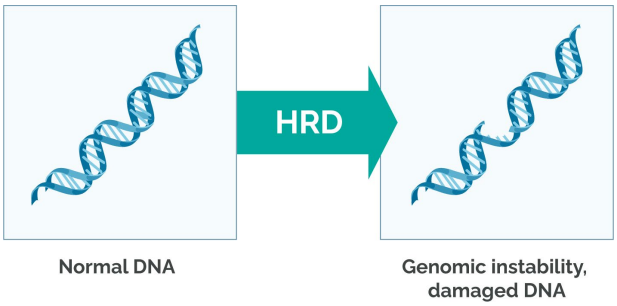
Use to navigate.

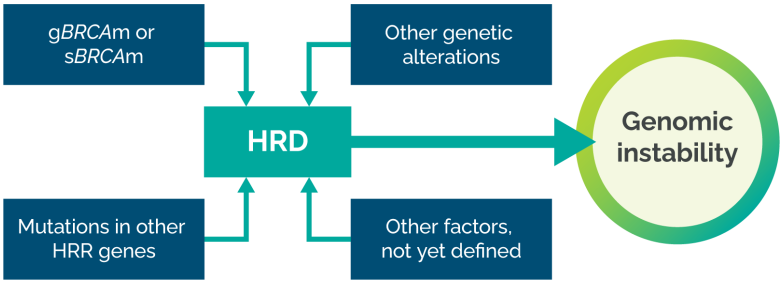
ISI

1 WHAT Is HRD?

Homologous recombination deficiency (HRD) is a tumor characteristic defined by an inability to accurately repair double-strand breaks in DNA via the HRR pathway, resulting in **genomic instability**.[4]

HRD is NOT MSI, TMB, or PD-1/PD-L1 expression.[5]





Different genetic alterations can lead to HRD, which results in genomic instability. Mutations in ***BRCA* genes** are an archetypal cause.[4,6]

HRR genetic mutations in ovarian tumors can be **germline** (inheritable) or **somatic** (acquired).[4,7]

■ Mutation present ■ Mutation not present

	Germline mutation[8,9]	Somatic mutation[8,9]
Present in tumor cells	✓	✓
Present in all body cells	✓	✕*
Present in germ cells	✓	✕
Can be inherited	✓	✕
Identified by	Blood test OR Tumor tissue test†	Tumor tissue test†

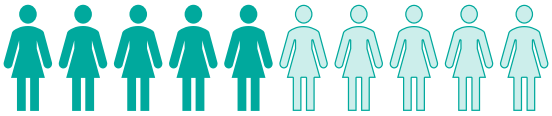
*Mutation present only in body cells arising from a mutated cell.[9]
†Tumor tissue testing can identify germline and somatic mutations but cannot distinguish between them.[9]

g*BRCA*m, germline *BRCA* mutation; HRR, homologous recombination repair; MSI, microsatellite instability; PD-1, programmed cell death protein 1; PD-L1, programmed death ligand 1; s*BRCA*m, somatic *BRCA* mutation; TMB, tumor mutational burden.

2 WHY Test for HRD in Patients With Advanced Ovarian Cancer?

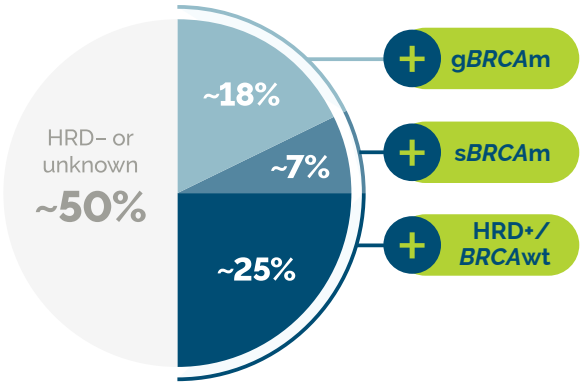
Select to learn about PARPi indications in ovarian cancer.

About half of high-grade serous ovarian cancers (the most common histological subtype) exhibit HRD.[10]



Tumor testing for *BRCA*m and HRD (including genomic instability tests) may identify more patients than testing for germline or tumor *BRCA*m alone.[4,10]

Biomarker status of HGSOC[7,10]



Select to learn about different testing outcomes.

HRD and *BRCA* testing can provide insight into:

Hereditary risk: Germline *BRCA*m are associated with familial risk of ovarian cancer.[11]

Prediction of response: HRD+ status is associated with increased sensitivity to PARPi therapy.[13]

Prognosis: HRD+ status is associated with improved prognosis with standard-of-care chemotherapy.[12]

Eligibility for therapy: Certain PARPi-containing maintenance regimens are only approved for patients with *BRCA*-mutated or HRD+ ovarian cancer.[4]

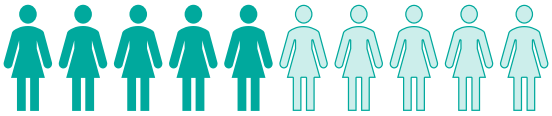
*BRCA*m, *BRCA* mutation; *BRCA*wt, *BRCA* wild type; g*BRCA*m, germline *BRCA* mutation; HGSOC, high-grade serous ovarian cancer; HRD, homologous recombination deficiency; HRD+, homologous recombination deficiency–positive; HRD-, homologous recombination deficiency–negative; PARPi, poly (ADP-ribose) polymerase inhibitor; s*BRCA*m, somatic *BRCA* mutation.

ISI

2 WHY Test for HRD in Patients With Advanced Ovarian Cancer?

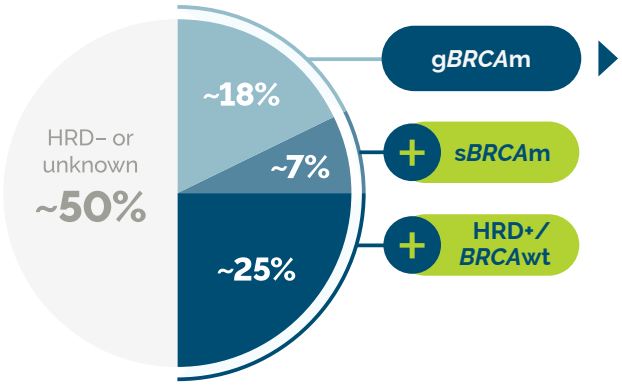
Select to learn about PARPi indications in ovarian cancer.

About half of high-grade serous ovarian cancers (the most common histological subtype) exhibit HRD.[10]



Tumor testing for *BRCA*m and HRD (including genomic instability tests) may identify more patients than testing for germline or tumor *BRCA*m alone.[4,10]

Biomarker status of HGSOC[7,10]



gBRCAm testing only[7,10]

18% g*BRCA*m positive

Testing only g*BRCA*m **misses more than half** of all patients who are HRD+.

All patients with *BRCA*m are HRD+, but not all patients with HRD have *BRCA*m.[4]

HRD and *BRCA* testing can provide insight into:

Hereditary risk: Germline *BRCA*m are associated with familial risk of ovarian cancer.[11]

Prediction of response: HRD+ status is associated with increased sensitivity to PARPi therapy.[13]

Prognosis: HRD+ status is associated with improved prognosis with standard-of-care chemotherapy.[12]

Eligibility for therapy: Certain PARPi-containing maintenance regimens are only approved for patients with *BRCA*-mutated or HRD+ ovarian cancer.[4]

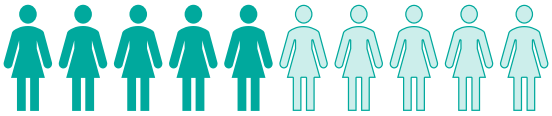
*BRCA*m, *BRCA* mutation; *BRCA*wt, *BRCA* wild type; g*BRCA*m, germline *BRCA* mutation; HGSOC, high-grade serous ovarian cancer; HRD, homologous recombination deficiency; HRD+, homologous recombination deficiency–positive; HRD-, homologous recombination deficiency–negative; PARPi, poly (ADP-ribose) polymerase inhibitor; s*BRCA*m, somatic *BRCA* mutation.

ISI

2 WHY Test for HRD in Patients With Advanced Ovarian Cancer?

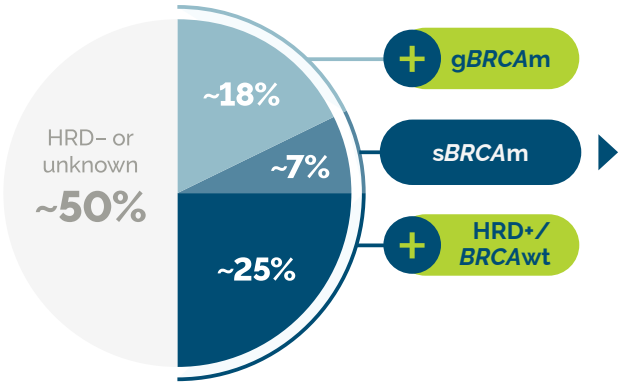
Select to learn about PARPi indications in ovarian cancer.

About half of high-grade serous ovarian cancers (the most common histological subtype) exhibit HRD.[10]



Tumor testing for *BRCA*m and HRD (including genomic instability tests) may identify more patients than testing for germline or tumor *BRCA*m alone.[4,10]

Biomarker status of HGSOC[7,10]



Tumor *BRCA*m (g*BRCA*m + s*BRCA*m) testing[7,10]

25% tumor *BRCA*m positive

18% g*BRCA*m positive
7% s*BRCA*m positive

Testing only tumor *BRCA*m **misses about half** of all patients with HRD.

Tumor tests cannot distinguish between germline and somatic mutations.[9]

HRD and *BRCA* testing can provide insight into:

Hereditary risk: Germline *BRCA*m are associated with familial risk of ovarian cancer.[11]

Prediction of response: HRD+ status is associated with increased sensitivity to PARPi therapy.[13]

Prognosis: HRD+ status is associated with improved prognosis with standard-of-care chemotherapy.[12]

Eligibility for therapy: Certain PARPi-containing maintenance regimens are only approved for patients with *BRCA*-mutated or HRD+ ovarian cancer.[4]

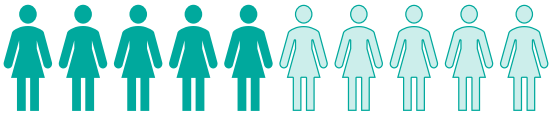
*BRCA*m, *BRCA* mutation; *BRCA*wt, *BRCA* wild type; g*BRCA*m, germline *BRCA* mutation; HGSOC, high-grade serous ovarian cancer; HRD, homologous recombination deficiency; HRD+, homologous recombination deficiency–positive; HRD-, homologous recombination deficiency–negative; PARPi, poly (ADP-ribose) polymerase inhibitor; s*BRCA*m, somatic *BRCA* mutation.

ISI

2 WHY Test for HRD in Patients With Advanced Ovarian Cancer?

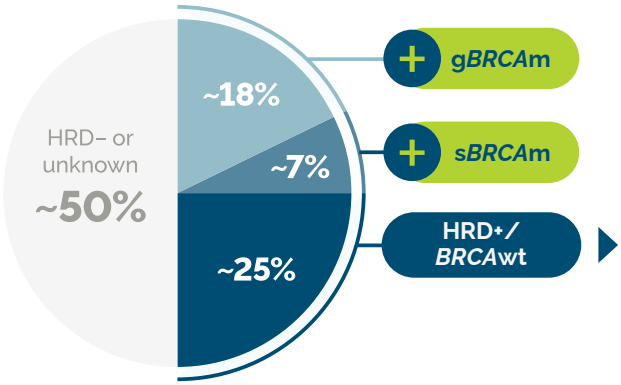
Select to learn about PARPi indications in ovarian cancer.

About half of high-grade serous ovarian cancers (the most common histological subtype) exhibit HRD.[10]

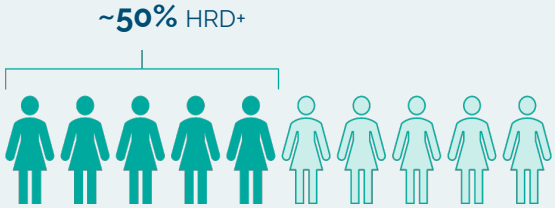


Tumor testing for *BRCA*m and HRD (including genomic instability tests) may identify more patients than testing for germline or tumor *BRCA*m alone.[4,10]

Biomarker status of HGSOC[7,10]



HRD Testing[7,10]



Testing for HRD, which includes tumor *BRCA*m testing, **identifies all** patients with HRD.

Testing for *BRCA*m only will miss half of all patients who are HRD+.

HRD and *BRCA* testing can provide insight into:

Hereditary risk: Germline *BRCA*m are associated with familial risk of ovarian cancer.[11]

Prediction of response: HRD+ status is associated with increased sensitivity to PARPi therapy.[13]

Prognosis: HRD+ status is associated with improved prognosis with standard-of-care chemotherapy.[12]

Eligibility for therapy: Certain PARPi-containing maintenance regimens are only approved for patients with *BRCA*-mutated or HRD+ ovarian cancer.[4]

*BRCA*m, *BRCA* mutation; *BRCA*wt, *BRCA* wild type; g*BRCA*m, germline *BRCA* mutation; HGSOC, high-grade serous ovarian cancer; HRD, homologous recombination deficiency; HRD+, homologous recombination deficiency–positive; HRD-, homologous recombination deficiency–negative; PARPi, poly (ADP-ribose) polymerase inhibitor; s*BRCA*m, somatic *BRCA* mutation.

ISI

PARPis as First-Line Maintenance Therapy in Advanced Ovarian Cancer

Certain PARPis **require a positive *BRCA* and/or HRD test** for patients with advanced ovarian cancer to be eligible for first-line maintenance therapy.*[1,14]

Drug approved for patients with any of the following†:

	*gBRCA*m	*sBRCA*m	HRD+
LYNPARZA® (olaparib) monotherapy[1]	✓	✓	—
LYNPARZA + bevacizumab combination therapy[1]	✓	✓	✓
Zejula® (niraparib) monotherapy[14]	✓	✓	✓
Rubraca® (rucaparib) monotherapy[15]	—	—	—

LYNPARZA is indicated as monotherapy for the maintenance treatment of adult patients with deleterious or suspected deleterious germline or somatic *BRCA*-mutated (g*BRCA*m or s*BRCA*m) advanced epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in complete or partial response to first-line, platinum-based chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA.[1]

LYNPARZA is indicated in combination with bevacizumab for the maintenance treatment of adult patients with advanced epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in complete or partial response to first-line, platinum-based chemotherapy and whose cancer is associated with HRD-positive status defined by either[1]:

- a deleterious or suspected deleterious *BRCA* mutation, and/or
- genomic instability

Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA.[1]

In the PAOLA-1 clinical trial, HRD+ was defined as a tumor *BRCA* mutation and/or a GIS ≥42 by the Myriad MyChoice® HRD assay.[3]

Zejula is a PARPi indicated for the maintenance treatment of adult patients with advanced epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in a complete or partial response to first-line platinum-based chemotherapy and whose cancer is associated with HRD-positive status defined by either[14]:

- a deleterious or suspected deleterious *BRCA* mutation, and/or
- genomic instability

Rubraca does not currently have an approved indication as a first-line maintenance therapy in advanced ovarian cancer.[15]

*No PARPis are approved for use in HRD-negative patients. Bevacizumab monotherapy may be a treatment option for these patients; Avastin® (bevacizumab) in combination with carboplatin and paclitaxel, followed by Avastin as a single agent, is indicated for the treatment of patients with stage III or IV epithelial ovarian, fallopian tube, or primary peritoneal cancer following initial surgical resection.[1,14-16]

†Only first-line maintenance indications in ovarian cancer are described. See Prescribing Information for full indications.

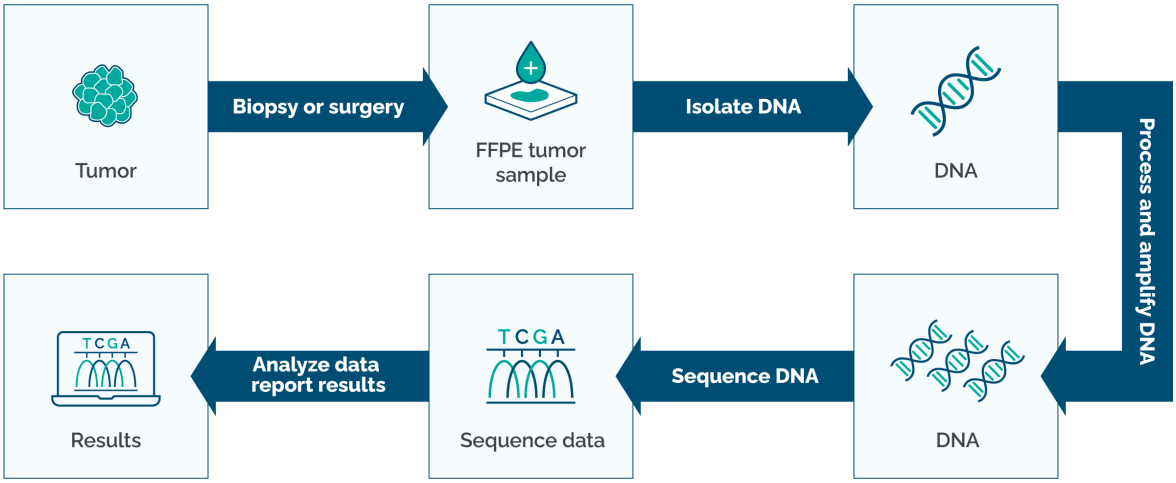
*BRCA*m, *BRCA* mutation; FDA, US Food and Drug Administration; g*BRCA*m, germline *BRCA* mutation; GIS, Genomic Instability Score; HRD, homologous recombination deficiency; HRD+, homologous recombination deficiency–positive; PARPis, poly (ADP-ribose) polymerase inhibitors; s*BRCA*m, somatic *BRCA* mutation.

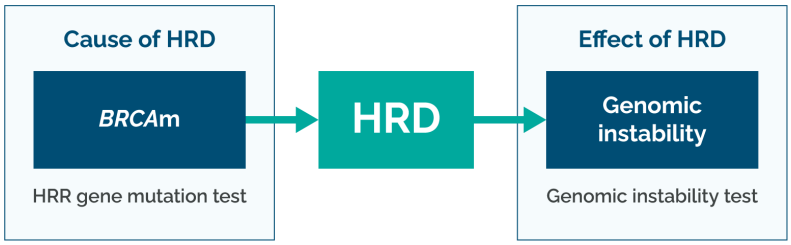
ISI

3 HOW Do HRD Tests Work?

HRD tests analyze DNA isolated from tumor samples, collected by biopsy or during surgical resection.[4]
This testing should be done at diagnosis to inform first-line treatment decisions.[11]

Workflow of HRD test[2,4]

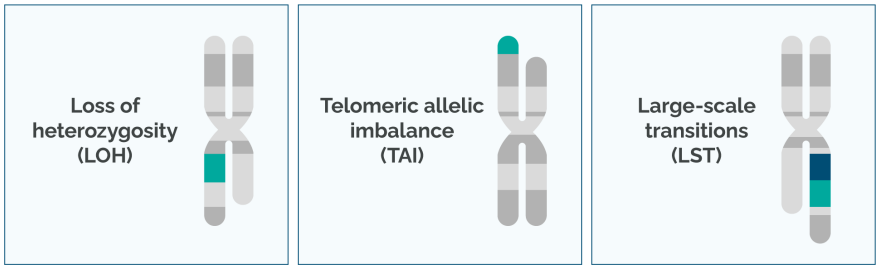




HRD tests like MyChoice® CDx (Myriad Genetic Laboratories, Inc.) use NGS assays to identify:[2,6]

- The **cause of HRD** (eg, *BRCA*m and other HRR gene mutations)
- The **effect of HRD** (genomic alterations caused by deficient HRR)

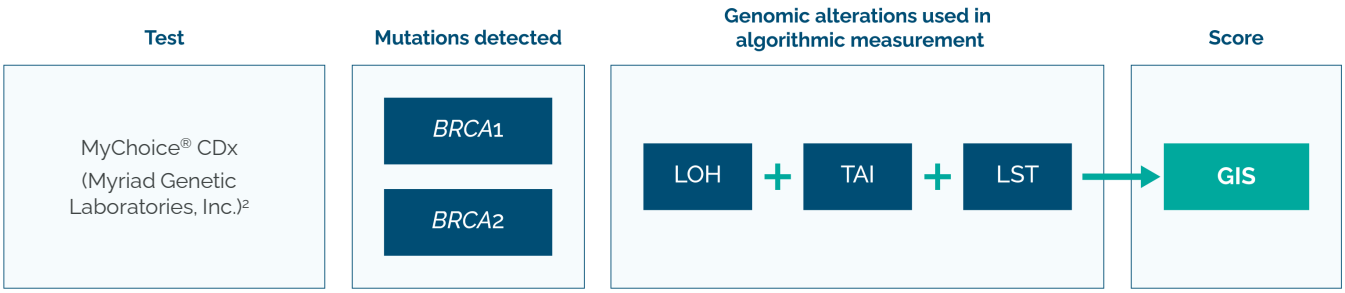
Genomic instability tests look for **large-scale genomic alterations** called **genomic scars**. These can include[6]:



*BRCA*m, *BRCA* mutation; FFPE, formalin-fixed, paraffin-embedded; HRD, homologous recombination deficiency; HRR, homologous recombination repair; NGS, next-generation sequencing; PARPi, poly (ADP-ribose) polymerase inhibitor.

3 HOW Do HRD Tests Work?

The results of these tests provide a score that quantifies genomic instability. Different tests use different combinations of genomic alterations to produce a score.[4]



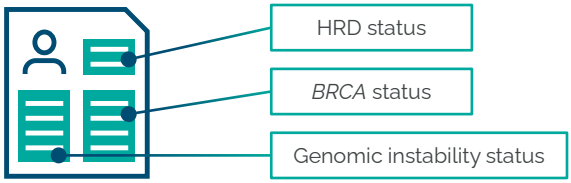
A positive MyChoice® CDx HRD test is defined as[2]:

- **The presence of a *BRCA* mutation and/or**
- **A GIS (based on LOH, TAI, LST) above a predefined threshold.**

In the PAOLA-1 clinical trial, HRD+ was defined as a tumor *BRCA* mutation and/or a GIS ≥42 by the Myriad MyChoice® HRD assay.[3]

An HRD test report should therefore contain **3 results**[2,6]:

- Overall HRD status (positive, negative, or unknown)
- *BRCA* status (*BRCA*m or non-*BRCA*m)
- Genomic instability status (high or low GIS score)



MyChoice® CDx (Myriad Genetic Laboratories, Inc.) **is the FDA-approved HRD test** for use with LYNPARZA.[2]

*BRCA*m, *BRCA* mutation; GIS, Genomic Instability Score; HRD, homologous recombination deficiency; LOH, loss of heterozygosity; LST, large-scale transitions; TAI, telomeric allelic imbalance.

ISI

4 WHICH *BRCA* or HRD Tests Are Available for Patients With Advanced Ovarian Cancer?

Selected examples of FDA-approved *BRCA* and HRD CDx tests are shown in the table.

HRD and *BRCA* CDx tests in advanced ovarian cancer[6,17-20]

Test (company)*	Sample type	g*BRCA* test‡	Tumor *BRCA* test‡	HRD test	Turnaround time	Approved as CDx in advanced ovarian cancer for?
BRACAnalysis CDx® (Myriad Genetic Laboratories, Inc.)[17,18]	Whole blood	✓			<2 weeks	• LYNPARZA® (olaparib) g*BRCA* • Zejula® (niraparib) g*BRCA*
MyChoice® CDx (Myriad Genetic Laboratories, Inc.)[2,19]	FFPE tumor specimen		✓	✓	≤14 days	• LYNPARZA® (olaparib) tumor *BRCA* and HRD
FoundationOne® CDx (Foundation Medicine)[6,19,20]	FFPE tumor specimen		✓		≤12 days	• LYNPARZA® (olaparib) tumor *BRCA*

*CDx tests only; not an exhaustive list of available tests.
†Detects germline *BRCA* mutations only; does not detect somatic mutations or HRD.
‡Tumor *BRCA* tests do not distinguish between germline and somatic *BRCA*m.

The Myriad MyChoice® CDx test is an **FDA-approved CDx** used to identify patients eligible for the combination of LYNPARZA plus bevacizumab as maintenance therapy in ovarian cancer.[1,2]

Consider using the HRD test that is the approved CDx for LYNPARZA plus bevacizumab therapy—Myriad MyChoice® CDx.[1,2]

*BRCA*m, *BRCA* mutation; CDx, companion diagnostic; FDA, US Food and Drug Administration; FFPE, formalin-fixed, paraffin-embedded; g*BRCA*, germline *BRCA;* HRD, homologous recombination deficiency.

5 WHAT Are the Recommendations Regarding HRD Testing in Advanced Ovarian Cancer?

Key treatment guidelines recommend HRD and *BRCA* mutation testing in patients with advanced ovarian cancer. Testing should be performed **at diagnosis**.

+ National Comprehensive Cancer Network® (NCCN®) **+ ASCO** **+ SGO**

Select to learn about testing guidelines.

Whom to Test?

All patients with ovarian cancer, fallopian tube cancer, or primary peritoneal cancer should have genetic risk evaluation and germline and somatic testing (if not previously done).[21]

What to Test?

Germline testing: *BRCA1* and *BRCA2* status should be tested.[21]

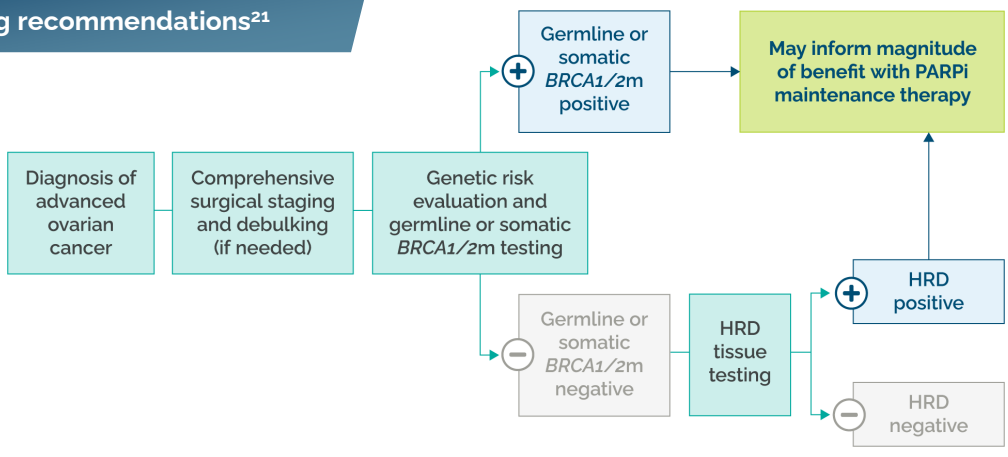
Tumor testing: In the up-front setting, choice of somatic testing should, at a minimum, optimize identification of molecular alterations that can inform use of interventions that have demonstrated benefit in this setting, including *BRCA1* and *BRCA2*, loss of heterozygosity, or HRD status in the absence of a germline *BRCA* mutation.[21]

In the absence of *BRCA1/2* status, homologous recombination status may provide information on the magnitude of benefit of PARPi therapy.[21]

When to Test?

Upon pathologic confirmation of ovarian cancer, fallopian tube cancer, or primary peritoneal cancer, patients should be referred for a genetic risk evaluation and germline and somatic testing (if not previously done).[21]

NCCN® ovarian cancer biomarker testing recommendations[21]



ASCO, American Society of Clinical Oncology; *BRCA1/2*m, *BRCA1* or *BRCA2* mutation; HRD, homologous recombination deficiency; NCCN®, National Comprehensive Cancer Network®; PARPi, poly (ADP-ribose) polymerase inhibitor; SGO, Society of Gynecologic Oncology.

5 WHAT Are the Recommendations Regarding HRD Testing in Advanced Ovarian Cancer?

Key treatment guidelines recommend HRD and *BRCA* mutation testing in patients with advanced ovarian cancer. Testing should be performed **at diagnosis**.

National Comprehensive Cancer Network® (NCCN®) | **ASCO** | **SGO**

Select to learn about testing guidelines.

Whom to Test?

All women diagnosed with epithelial ovarian cancer should be offered **germline genetic testing** irrespective of their clinical features or family cancer history. Somatic tumor testing should be performed in women who do not carry a germline pathogenic or likely pathogenic *BRCA1/2* variant.[11]

What to Test?

Germline: *BRCA1*, *BRCA2*, and other ovarian cancer susceptibility genes.[11]

Somatic: Somatic tumor testing for *BRCA1* and *BRCA2* pathogenic or likely pathogenic variants.[11]

HRD: Somatic tumor testing should involve measure(s) of homologous recombination.[22]

When to Test?

Testing should occur **at the time of diagnosis** or as soon as feasibly possible.[22]

ASCO, American Society of Clinical Oncology.

ISI

5 WHAT Are the Recommendations Regarding HRD Testing in Advanced Ovarian Cancer?

Key treatment guidelines recommend HRD and *BRCA* mutation testing in patients with advanced ovarian cancer. Testing should be performed **at diagnosis**.

National Comprehensive Cancer Network® (NCCN®) | **ASCO** | **SGO**

Select to learn about testing guidelines.

Whom to Test?

Universal germline genetic assessment for all those diagnosed with epithelial ovarian cancer.[23]

What to Test?

Germline: Universal testing.

Somatic: For patients undergoing upfront treatment for ovarian cancer with negative germline genetic testing, somatic tumor testing should, at a minimum, include molecular alterations that have immediate treatment implications. This includes ***BRCA1/2* somatic variants, loss of heterozygosity, and HRD status,** as these findings can guide the use of PARP inhibitor maintenance therapy.[23]

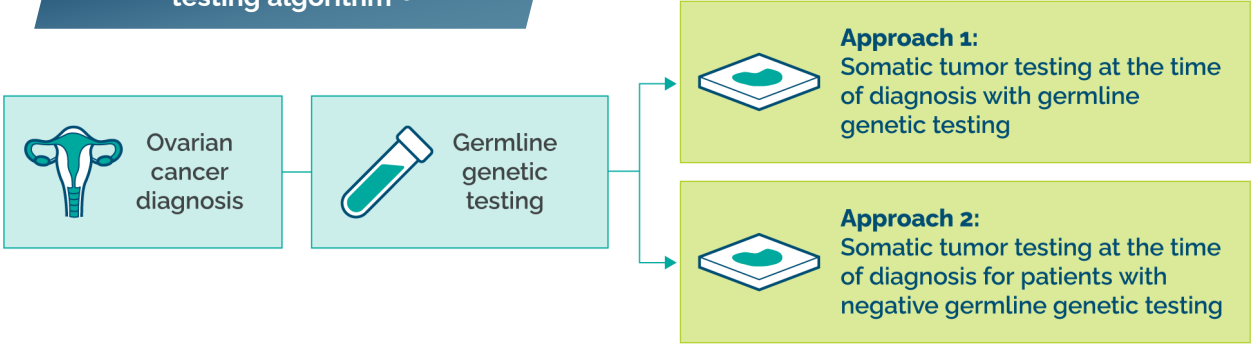
When to Test?

Test all patients at the time of disease diagnosis, with 2 possible approaches[23]:

Approach 1: Order somatic tumor testing for HRD with germline *BRCA* testing.

Approach 2: Order somatic tumor testing for HRD for patients with negative germline *BRCA* testing.

SGO ovarian cancer genetic testing algorithm[23]



HRD, homologous recombination deficiency; SGO, Society of Gynecologic Oncology.

ISI

6 WHAT Is the Take-Home Message?

- HRD is a tumor characteristic defined by an inability to accurately repair double-strand breaks in DNA via the HRR pathway, resulting in genomic instability.[4]
- HRR genetic mutations can be germline (inheritable) or somatic (acquired).[4,7]
- About half of high-grade serous ovarian cancers (the most common histological subtype) exhibit HRD.[10]
- Tumor testing for *BRCA*m and HRD (including genomic instability tests) may identify more patients than testing for germline or tumor *BRCA*m alone; testing for *BRCA*m alone misses more than half of all patients who are HRD+.[4,7,10]
- HRD+ status is associated with increased sensitivity to PARPi maintenance therapy, and certain PARPi-containing maintenance regimens are only approved for select patients with *BRCA*m or HRD+ ovarian cancer.[4,13]
- Several commercial *BRCA*m and HRD tests are available; the MyChoice® CDx test (Myriad Genetic Laboratories, Inc.) is a HRD test approved by the FDA as a CDx for use with LYNPARZA plus bevacizumab.[2,17,20]
- A positive MyChoice® CDx HRD test is defined as[2]:
  - The presence of a *BRCA* mutation and/or
  - A GIS (based on LOH, TAI, LST) above a predefined threshold
- Many treatment guidelines recommend HRD and *BRCA*m testing in all patients; patients with ovarian cancer should be tested for HRD once diagnosis is confirmed, prior to initiating treatment.[11,21-23]
- Consider using the HRD test that is the approved CDx for LYNPARZA plus bevacizumab therapy—Myriad MyChoice® CDx.[2]

*BRCA*m, *BRCA* mutation; CDx, companion diagnostic; FDA, US Food and Drug Administration; GIS, Genomic Instability Score; HRD, homologous recombination deficiency; HRD+, homologous recombination deficiency–positive; HRR, homologous recombination repair; LOH, loss of heterozygosity; LST, large-scale transitions; PARPi, poly (ADP-ribose) polymerase inhibitor; TAI, telomeric allelic imbalance.

Zejula®, Rubraca®, and Avastin® are trademarks of GlaxoSmithKline, pharma&, and Genentech Inc., respectively.

References

1. LYNPARZA® (olaparib) [prescribing information]. Wilmington, DE AstraZeneca Pharmaceuticals LP; 2025.
2. Myriad Genetic Laboratories, Inc. Myriad MyChoice® CDx Technical Information. Accessed June 30, 2025. https://s3.amazonaws.com/myriad-web/myChoiceCDx/downloads/myChoiceCDxTech.pdf
3. Ray-Coquard I, Pautier P, Pignata S, et al. Olaparib plus bevacizumab as first-line maintenance in ovarian cancer. *N Engl J Med.* 2019;381(25):2416-2428.
4. Miller RE, Leary A, Scott CL, et al. ESMO recommendations on predictive biomarker testing for homologous recombination deficiency and PARP inhibitor benefit in ovarian cancer. *Ann Oncol.* 2020;31(12):1606-1622.
5. National Cancer Institute (NCI). *NCI Dictionary of Cancer Terms.* Bethesda, MD: U.S. National Institutes of Health (NIH); 2025.
6. Stewart MD, Merino Vega D, Arend RC, et al. Homologous recombination deficiency: concepts, definitions, and assays. *Oncologist.* 2022;27(3):167-174.
7. Pennington KP, Walsh T, Harrell MI, et al. Germline and somatic mutations in homologous recombination genes predict platinum response and survival in ovarian, fallopian tube, and peritoneal carcinomas. *Clin Cancer Res.* 2014;20(3):764-775.
8. Vijg J, Schumacher B, Abakir A, et al. Mitigating age-related somatic mutation burden. *Trends Mol Med.* 2023;29(7):530-540.
9. Capoluongo E, Ellison G, López-Guerrero JA, et al. Guidance statement on BRCA1/2 tumor testing in ovarian cancer patients. *Semin Oncol.* 2017;44(3):187-197.
10. Konstantinopoulos PA, Ceccaldi R, Shapiro GI, D'Andrea AD. Homologous recombination deficiency: exploiting the fundamental vulnerability of ovarian cancer. *Cancer Discov.* 2015;5(11):1137-1154.
11. Konstantinopoulos PA, Norquist B, Lacchetti C, et al. Germline and somatic tumor testing in epithelial ovarian cancer: ASCO guideline. *J Clin Oncol.* 2020;38(11):1222-1245.
12. Abkevich V, Timms KM, Hennessy BT, et al. Patterns of genomic loss of heterozygosity predict homologous recombination repair defects in epithelial ovarian cancer. *Br J Cancer.* 2012;107(10):1776-1782.
13. Ngoi NYL, Tan DSP. The role of homologous recombination deficiency testing in ovarian cancer and its clinical implications: do we need it? *ESMO Open.* 2021;6(3):100144.
14. Zejula® (niraparib) [prescribing information]. GlaxoSmithKline; 2025.
15. Rubraca® (rucaparib) [prescribing information]. zr pharma& GmbH; 2024.
16. Avastin® (bevacizumab) [prescribing information]. Genentech, Inc; 2022.
17. Myriad Genetic Laboratories, Inc. Myriad BRACAnalysis CDx® Technical Information. Accessed July 2, 2025. https://myriad-library.s3.amazonaws.com/technical-specifications/BRACAnalysis_CDx_Tech_Specs.pdf
18. Myriad Genetic Laboratories, Inc. BRACAnalysis CDx Germline Companion Diagnostic Test. Accessed June 15, 2025. https://myriad.com/genetic-tests/bracanalysiscdx-germline-test/
19. Tan H, Hosein PJ. Detection and therapeutic implications of homologous recombination repair deficiency in pancreatic cancer: a narrative review. *J Gastrointest Oncol.* 2023;14(05):2249-2259.
20. Foundation Medicine, Inc. FoundationOne® CDx Technical Information. Accessed June 15, 2025. https://www.foundationmedicine.com/sites/default/files/media/documents/2025-04/RAL-0003_v31%20F1CDx%20Tech%20Label_P170019S054_clean_final.docx.pdf
21. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Ovarian Cancer, including Fallopian Tube Cancer and Primary Peritoneal Cancer V.3.2025. © National Comprehensive Cancer Network, Inc. 2025. All rights reserved. Accessed July 28, 2025. To view the most recent and complete version of the guideline, go online to NCCN.org. NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way.
22. Gaillard S, Lacchetti C, Armstrong DK, et al. Neoadjuvant chemotherapy for newly diagnosed, advanced ovarian cancer: ASCO guideline update. *J Clin Oncol.* 2025;43(7):868-891.
23. Gressel GM, Frey MK, Norquist B, et al. Germline and somatic testing for ovarian cancer: an SGO clinical practice statement. *Gynecol Oncol.* 2024;181:170-178.

Indications and Important Safety Information

See Important Safety Information, including Warnings and Precautions for MDS/AML, pneumonitis, venous thromboembolism, and embryo-fetal toxicity below.

INDICATIONS
LYNPARZA is a poly (ADP-ribose) polymerase (PARP) inhibitor indicated:

First-Line Maintenance *BRCA*m Advanced Ovarian Cancer
For the maintenance treatment of adult patients with deleterious or suspected deleterious germline or somatic *BRCA*-mutated (g*BRCA*m or s*BRCA*m) advanced epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in complete or partial response to first-line, platinum-based chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA.

First-Line Maintenance HRD-Positive Advanced Ovarian Cancer in Combination with Bevacizumab
In combination with bevacizumab for the maintenance treatment of adult patients with advanced epithelial ovarian, fallopian tube or primary peritoneal cancer who are in complete or partial response to first-line, platinum-based chemotherapy and whose cancer is associated with homologous recombination deficiency (HRD)-positive status defined by either:
- a deleterious or suspected deleterious *BRCA* mutation, and/or
- genomic instability

Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA.

Maintenance *BRCA*-mutated Recurrent Ovarian Cancer
For the maintenance treatment of adult patients with deleterious or suspected deleterious germline or somatic *BRCA*-mutated (g*BRCA*m or s*BRCA*m) recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer, who are in complete or partial response to platinum-based chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA.

IMPORTANT SAFETY INFORMATION

CONTRAINDICATIONS
There are no contraindications for LYNPARZA.

WARNINGS AND PRECAUTIONS

Myelodysplastic Syndrome/Acute Myeloid Leukemia (MDS/AML): Occurred in approximately 1.2% of patients (26/2219) with various *BRCA*m, g*BRCA*m, HRR gene-mutated or HRD-positive cancers who received LYNPARZA in clinical studies as a single agent or as part of a combination regimen, consistent with the approved indications, and the majority of events had a fatal outcome. The median duration of therapy in patients who developed MDS/AML was approximately 2 years (range: <6 months to >4 years). All of these patients had previous chemotherapy with platinum agents and/or other DNA-damaging agents, including radiotherapy.

In SOLO-1, patients with newly diagnosed advanced *BRCA*m ovarian cancer, the incidence of MDS/AML was 1.9% (5/260) in patients who received LYNPARZA and 0.8% (1/130) in patients who received placebo based on an updated analysis. In PAOLA-1, of patients with newly diagnosed advanced ovarian cancer with HRD-positive status, the incidence of MDS/AML was 1.6% (4/255) in patients who received LYNPARZA and 2.3% (3/131) in the control arm.

In SOLO-2, patients with *BRCA*m platinum-sensitive relapsed ovarian cancer, the incidence of MDS/AML was 8% (15/195) in patients who received LYNPARZA and 4% (4/99) in patients who received placebo. The duration of LYNPARZA treatment prior to the diagnosis of MDS/AML ranged from 0.6 years to 4.5 years.

Do not start LYNPARZA until patients have recovered from hematological toxicity caused by previous chemotherapy (≤Grade 1). Monitor complete blood count for cytopenia at baseline and monthly thereafter for clinically significant changes during treatment. For prolonged hematological toxicities, interrupt LYNPARZA and monitor blood counts weekly until recovery. If the levels have not recovered to Grade 1 or less after 4 weeks, refer the patient to a hematologist for further investigations, including bone marrow analysis and blood sample for cytogenetics. Discontinue LYNPARZA if MDS/AML is confirmed.

Pneumonitis: Including severe and fatal cases, has occurred in patients treated with LYNPARZA. In clinical studies, among patients who received LYNPARZA as a single agent or as part of a combination regimen, the incidence of pneumonitis, including fatal cases, was 1.0% (29/2851). If patients present with new or worsening respiratory symptoms such as dyspnea, cough, and fever, or a radiological abnormality occurs, interrupt LYNPARZA treatment and promptly assess the source of the symptoms. If pneumonitis is confirmed, discontinue LYNPARZA treatment and treat the patient appropriately.

Indications and Important Safety Information

Venous Thromboembolism (VTE): Including severe or fatal pulmonary embolism (PE), occurred in patients treated with LYNPARZA. Monitor patients for signs and symptoms of venous thrombosis and pulmonary embolism, and treat as medically appropriate, which may include long-term anticoagulation as clinically indicated.

Hepatotoxicity, including Drug-Induced Liver Injury (DILI): Hepatotoxicity, including severe and potentially fatal cases of DILI has occurred in patients treated with LYNPARZA. Evaluate bilirubin and transaminases at baseline and throughout treatment with LYNPARZA. For patients who develop abnormal liver tests after LYNPARZA, monitor more frequently for liver test abnormalities and clinical signs and symptoms of hepatic toxicity. If DILI is suspected, withhold LYNPARZA. Upon confirmation of DILI, discontinue LYNPARZA.

Embryo-Fetal Toxicity: Based on its mechanism of action and findings in animals, LYNPARZA can cause fetal harm. Verify pregnancy status in females of reproductive potential prior to initiating treatment.

Females
Advise females of reproductive potential of the potential risk to a fetus and to use effective contraception during treatment and for 6 months following the last dose.

ADVERSE REACTIONS—First-Line Maintenance *BRCA*m Advanced Ovarian Cancer
Most common adverse reactions (all Grades) in ≥10% of patients who received LYNPARZA in the **first-line maintenance setting** for **SOLO-1** were: nausea (77%), fatigue (67%), abdominal pain (45%), vomiting (40%), anemia (38%), diarrhea (37%), constipation (28%), upper respiratory tract infection/influenza/nasopharyngitis /bronchitis (28%), dysgeusia (26%), decreased appetite (20%), dizziness (20%), neutropenia (17%), dyspepsia (17%), dyspnea (15%), leukopenia (13%), urinary tract infection (13%), thrombocytopenia (11%), and stomatitis (11%).

Most common laboratory abnormalities (Grades 1-4) in ≥25% of patients who received LYNPARZA in **the first-line maintenance setting** for **SOLO-1** were: decrease in hemoglobin (87%), increase in mean corpuscular volume (87%), decrease in leukocytes (70%), decrease in lymphocytes (67%), decrease in absolute neutrophil count (51%), decrease in platelets (35%), and increase in serum creatinine (34%).

ADVERSE REACTIONS—First-Line Maintenance Advanced Ovarian Cancer in Combination with Bevacizumab
Most common adverse reactions (Grades 1-4) in ≥10% of patients treated with LYNPARZA/bevacizumab and at a ≥5% frequency compared to placebo/bevacizumab in the **first-line maintenance setting** for **PAOLA-1** were: nausea (53%), fatigue (including asthenia) (53%), anemia (41%), lymphopenia (24%), vomiting (22%), and leukopenia (18%). In addition, the most common adverse reactions (≥10%) for patients receiving LYNPARZA/bevacizumab irrespective of the frequency compared with the placebo/bevacizumab arm were: diarrhea (18%), neutropenia (18%), urinary tract infection (15%), and headache (14%).

In addition, venous thromboembolism occurred more commonly in patients receiving LYNPARZA/bevacizumab (5%) than in those receiving placebo/bevacizumab (1.9%).

Most common laboratory abnormalities (Grades 1-4) in ≥25% of patients for LYNPARZA in combination with bevacizumab in the **first-line maintenance setting** for **PAOLA-1** were: decrease in hemoglobin (79%), decrease in lymphocytes (63%), increase in serum creatinine (61%), decrease in leukocytes (59%), decrease in absolute neutrophil count (35%), and decrease in platelets (35%).

ADVERSE REACTIONS—Maintenance g*BRCA*m Recurrent Ovarian Cancer
Most common adverse reactions (Grades 1-4) in ≥20% of patients who received LYNPARZA in the **maintenance setting** for **SOLO-2** were: nausea (76%), fatigue (including asthenia) (66%), anemia (44%), vomiting (37%), nasopharyngitis/upper respiratory tract infection (URI)/sinusitis/rhinitis/influenza (36%), diarrhea (33%), arthralgia/myalgia (30%), dysgeusia (27%), headache (26%), decreased appetite (22%), and stomatitis (20%).

Most common laboratory abnormalities (Grades 1-4) in ≥25% of patients who received LYNPARZA in the **maintenance setting** for **SOLO-2** were: increase in mean corpuscular volume (89%), decrease in hemoglobin (83%), decrease in leukocytes (69%), decrease in lymphocytes (67%), decrease in absolute neutrophil count (51%), increase in serum creatinine (44%), and decrease in platelets (42%).

Indications and Important Safety Information

DRUG INTERACTIONS

Anticancer Agents: Clinical studies of LYNPARZA with other myelosuppressive anticancer agents, including DNA-damaging agents, indicate a potentiation and prolongation of myelosuppressive toxicity.

CYP3A Inhibitors: Avoid coadministration of strong or moderate CYP3A inhibitors when using LYNPARZA. If a strong or moderate CYP3A inhibitor must be coadministered, reduce the dose of LYNPARZA. Advise patients to avoid grapefruit, grapefruit juice, Seville oranges, and Seville orange juice during LYNPARZA treatment.

CYP3A Inducers: Avoid coadministration of strong or moderate CYP3A inducers when using LYNPARZA.

USE IN SPECIFIC POPULATIONS

Lactation: No data are available regarding the presence of olaparib in human milk, its effects on the breastfed infant or on milk production. Because of the potential for serious adverse reactions in the breastfed infant, advise a lactating woman not to breastfeed during treatment with LYNPARZA and for 1 month after receiving the final dose.

Pediatric Use: The safety and efficacy of LYNPARZA have not been established in pediatric patients.

Hepatic Impairment: No adjustment to the starting dose is required in patients with mild or moderate hepatic impairment (Child-Pugh classification A and B). There are no data in patients with severe hepatic impairment (Child-Pugh classification C).

Renal Impairment: No dosage modification is recommended in patients with mild renal impairment (CLcr 51-80 mL/min estimated by Cockcroft-Gault). In patients with moderate renal impairment (CLcr 31-50 mL/min), reduce the dose of LYNPARZA to 200 mg twice daily. There are no data in patients with severe renal impairment or end-stage renal disease (CLcr ≤30 mL/min).

Please see complete Prescribing Information, including Medication Guide for LYNPARZA.

You may report side effects related to AstraZeneca products.