

Avastin® (bevacizumab) and PARP inhibitor approvals in ovarian cancer as of January 2019

The following graphic illustrates where Avastin and PARP inhibitors are currently approved in ovarian cancer.^{1-4*}

1L		2L PLATINUM-SENSITIVE		2L PLATINUM-RESISTANT	3L PLATINUM-SENSITIVE		3L PLATINUM-RESISTANT	4L+	
Induction	Maintenance	Induction	Maintenance		Induction	Maintenance		Induction	Maintenance
Avastin® (bevacizumab)		Avastin® (bevacizumab)		Avastin® (bevacizumab) plus chemotherapy			Avastin® (bevacizumab) plus chemotherapy		
Avastin plus chemotherapy	Avastin (up to 22 cycles)	Avastin plus chemotherapy	Avastin						
	BRCAm Lynparza® (olaparib)								
			Lynparza® (olaparib)			Lynparza® (olaparib)			Lynparza® (olaparib)
			Zejula® (niraparib)			Zejula® (niraparib)			Zejula® (niraparib)
			Rubraca® (rucaparib)			Rubraca® (rucaparib)			Rubraca® (rucaparib)
					BRCAm Rubraca® (rucaparib)				
Chemotherapy									

PARP=poly(ADP-ribose) polymerase; 1L=first-line; BRCAm=BRCA mutation; 2L=second-line; 3L=third-line; 4L=fourth-line; gBRCAm=germline BRCA mutation.

Indications

- Avastin, 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
- Avastin, in combination with paclitaxel, pegylated liposomal doxorubicin, or topotecan, is indicated for the treatment of patients with platinum-resistant recurrent epithelial ovarian, fallopian tube or primary peritoneal cancer who received no more than 2 prior chemotherapy regimens
- Avastin, in combination with carboplatin and paclitaxel, or with carboplatin and gemcitabine, followed by Avastin as a single agent, is indicated for the treatment of patients with platinum-sensitive recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer

Boxed WARNINGS

• Gastrointestinal (GI) perforation

- Serious and sometimes fatal GI perforation occurs at a higher incidence in Avastin-treated patients compared to patients treated with chemotherapy
- The incidence of GI perforation ranged from 0.3% to 3% across clinical studies
- Discontinue Avastin in patients with GI perforation

• Surgery and wound healing complications

- The incidence of wound healing and surgical complications, including serious and fatal complications, is increased in Avastin-treated patients
- Withhold Avastin for at least 28 days prior to elective surgery. Do not administer Avastin for at least 28 days after surgery and until the wound is fully healed
- Discontinue in patients with wound healing complications requiring medical intervention

• Hemorrhage

- Severe or fatal hemorrhage, including hemoptysis, GI bleeding, hematemesis, central nervous system hemorrhage, epistaxis, and vaginal bleeding, occurred up to 5-fold more frequently in patients receiving Avastin. In clinical studies, the incidence of grade ≥3 hemorrhagic events among patients receiving Avastin ranged from 0.4% to 7%
- Do not administer Avastin to patients with serious hemorrhage or a recent history of hemoptysis (≥1/2 tsp of red blood)
- Discontinue Avastin in patients who develop grade 3-4 hemorrhage

***Please see reverse for Lynparza®, Zejula®, and Rubraca® indication statements.**

Please see accompanying full Prescribing Information, including **Boxed WARNINGS**, and reverse for additional important safety information.

Important safety information (continued)

Additional serious adverse events

- Additional serious and sometimes fatal adverse events with increased incidence in the Avastin-treated arm vs chemotherapy arm included:
 - Non-GI fistulae (<1% to 1.8%, highest in patients with cervical cancer)
 - Arterial thromboembolic events (grade ≥ 3 , 5%, highest in patients with GBM)
 - Renal injury and proteinuria
 - Grade 3–4 proteinuria ranged from 0.7% to 7% in clinical studies
 - Nephrotic syndrome (<1%)
- Additional serious adverse events with increased incidence in the Avastin-treated arm vs chemotherapy arm included:
 - Venous thromboembolism (grade ≥ 3 , 11% seen in GOG-0240)
 - Hypertension (grade 3–4, 5%–18%)
 - Posterior reversible encephalopathy syndrome (PRES) (<0.5%)
 - Congestive heart failure (CHF): grade ≥ 3 left ventricular dysfunction (1%)
- Infusion reactions with the first dose of Avastin occurred in <3% of patients, and severe reactions occurred in 0.2% of patients
- Avoid use in patients with ovarian cancer who have evidence of recto-sigmoid involvement by pelvic examination or bowel involvement on CT scan or clinical symptoms of bowel obstruction
- Inform females of reproductive potential of the risk of ovarian failure prior to initiating treatment with Avastin

Other Indications

Lynparza® (olaparib) is indicated

- for the maintenance treatment of adult patients with deleterious or suspected deleterious germline or somatic *BRCA*-mutated (*gBRCAm* or *sBRCAm*) advanced epithelial ovarian, fallopian tube or primary peritoneal cancer who are in complete or partial response to first-line platinum-based chemotherapy. Select patients with *gBRCAm* advanced epithelial ovarian, fallopian tube or primary peritoneal cancer for therapy based on an FDA-approved companion diagnostic for Lynparza.
- for the maintenance treatment of adult patients with recurrent epithelial ovarian, fallopian tube or primary peritoneal cancer, who are in complete or partial response to platinum-based chemotherapy.
- for the treatment of adult patients with deleterious or suspected deleterious germline *BRCA*-mutated (*gBRCAm*) advanced ovarian cancer who have been treated with three or more prior lines of chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for Lynparza.

Pregnancy warning

- Based on the mechanism of action and animal studies, Avastin may cause fetal harm
- Advise female patients that Avastin may cause fetal harm, and to inform their healthcare provider of a known or suspected pregnancy
- Advise females of reproductive potential to use effective contraception during treatment with Avastin and for 6 months after the last dose of Avastin
- Advise nursing women not to breastfeed during treatment with Avastin and for 6 months following their last dose of treatment
- Avastin may impair fertility

Most common adverse events

- Across studies, the most common adverse reactions observed in Avastin patients at a rate >10% were:

—Epistaxis	—Proteinuria	—Lacrimation disorder
—Headache	—Taste alteration	—Back pain
—Hypertension	—Dry skin	—Exfoliative dermatitis
—Rhinitis	—Rectal hemorrhage	
- Across all studies, Avastin was discontinued in 8% to 22% of patients because of adverse reactions

Rubraca® (rucaparib) is indicated

- for the maintenance treatment of adult patients with recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in a complete or partial response to platinum-based chemotherapy
- for the treatment of adult patients with deleterious *BRCA* mutation (germline and/or somatic)-associated epithelial ovarian, fallopian tube, or primary peritoneal cancer who have been treated with two or more chemotherapies. Select patients for therapy based on an FDA-approved companion diagnostic for Rubraca®

Zejula® (niraparib) is indicated for the maintenance treatment of adult patients with recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in a complete or partial response to platinum-based chemotherapy.

Please see accompanying full Prescribing Information, including **Boxed WARNINGS**, and reverse for additional important safety information.

References: 1. Avastin Prescribing Information. Genentech, Inc. 2018. 2. Zejula Prescribing Information. TESARO, Inc. May 2018. 3. Lynparza Prescribing Information. AstraZeneca. December 2018. 4. Rubraca Prescribing Information. Clovis Oncology, Inc. April 2018.

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 **AVASTIN**®
bevacizumab
100 MG/4 ML INJECTION FOR IV USE