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Sleep disturbance and fatigue in patients with ovarian cancer during chemotherapy and surgery compared to PARPi maintenance therapy.

Abigail Newell, Elizabeth A. Szamreta, Erica E. Fortune, Maria Belen Gonzalo, M. Claire Saxton, Elif Andac-Jones; Cancer Support Community, Washington, DC; Merck & Co., Inc., Rahway, NJ

Background: Sleep disturbance and fatigue are prevalent among advanced ovarian cancer (OC) patients and are associated with poor health outcomes. It is unclear how sleep disturbance and fatigue vary across treatment timelines. This study evaluated how patients rate their sleep disturbance and fatigue levels at different points in their treatment trajectory. **Methods:** 200 U.S. patients with stage III/IV OC diagnosed in 2020-2023 were enrolled. Survey items asked patients to retrospectively assess their sleep disturbance and fatigue levels prior to diagnosis, during treatment, and presently. Sleep disturbance and fatigue were measured using a custom set of Patient-Reported Outcomes Measurement Information System (PROMIS) items based on previous findings. Most were receiving maintenance therapy (44%) or other treatments (34%), and 23% completed treatment. Nearly all participants received surgery (93%) and chemotherapy (97%). 44% of patients had received PARP inhibitor (PARPi) therapy, 18% received immunotherapy, and < 10% received other therapies. Repeated sample t-tests compared symptom burdens. **Results:** Participants ranked sleep disturbance as most intense during chemotherapy (52%), followed by surgery (33%), hormone therapy (32%), and PARPi (15%). Most participants ranked fatigue as most intense during chemotherapy (67%), followed by hormone therapy (31%), surgery (20%), and PARPi therapy (17%). Paired t-tests show that among participants who received only surgery, chemotherapy and PARPi therapy, sleep disturbance was perceived to be significantly more intense during chemotherapy than when receiving PARPi, $t(55) = -2.83$, $p = .006$) and in the 2 weeks after surgery than PARPi therapy, ($t(55) = -2.08$, $p = .043$) (*Table*). Fatigue was significantly more intense during chemotherapy than when receiving PARPi, ($t(55) = -6.21$, $p < .001$) and following surgery than PARPi ($t(54) = -4.16$, $p < .001$). **Conclusions:** OC patients experience intense sleep disturbance and fatigue and perceive levels differently depending on treatment. Chemotherapy was rated the worst for both sleep disturbance and fatigue compared to PARPi and other therapies. Targeted screening and psychosocial support can address these symptoms throughout treatment, especially after chemotherapy. Research Sponsor: None.

Sleep disturbance and fatigue by common treatment types.[1]

	All Treatment Types[2]						*Only Surgery, Chemotherapy, & PARPi*					
	Sleep Disturbance			Fatigue			Sleep Disturbance			Fatigue		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
Surgery	186	27.25	6.45	186	28.7	7.28	56	26.75	8.46	55	28.88	9.06
Chemotherapy	193	27.75	7.04	193	31.3	7.26		27.02	7.44		31.16	8.12
PARPi	87	24.32	7.73	88	23.9	8.96		24.34	7.98		23	8.29
VEGF	10	24.70	7.04	193	22.7	9.5						
Other Tx	60	21.58	7.18	67	23.2	9.78						

[1]Higher scores reflect more intense sleep disturbance and fatigue. Custom scores cannot be compared to other validated short forms or to other populations.
[2]n = 200.