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Supplementary Table 1. Sleep Aspects at Baseline and 1-Year Follow-up (N = 606)

	Baseline		12 Month		Valid %
	N ^Δ	% ^Δ	N	%	
Sleep Duration Score					
≥7 hours	315	52.0	257	42.4	54.6
≥6 - <7 hours	176	29.0	126	20.8	26.8
≥5 - <6 hours	69	11.4	60	9.9	12.7
<5 hours	46	7.6	28	4.6	5.9
Missing	-	-	135	22.3	-
Sleep Disturbance Score					
Not during the past month	12	2.0	18	3.0	3.8
Less than once a week	396	65.3	259	42.7	54.6
Once or twice a week	182	30.0	182	30.0	38.4
Three or more times a week	16	2.6	15	2.5	3.2
Missing	-	-	132	21.8	-
Sleep efficiency %					

≥85%	345	56.9	229	37.9	48.8
≥75% - <85%	120	19.8	125	20.6	26.7
≥65% - <75%	69	11.4	66	10.9	14.1
<65%	72	11.9	49	8.1	10.4
Missing	-	-	137	22.6	-
Sleep Onset Latency Score					
Not during the past month	162	26.7	119	19.6	25.3
Less than once a week	263	43.4	194	32.0	41.2
Once or twice a week	111	18.3	84	13.9	17.8
Three or more times a week	70	11.6	74	12.2	15.7
Missing	-	-	135	22.3	-
Sleep Onset Latency Time					
0-15 minutes	322	53.1	238	39.3	50.6
16-30 minutes	191	31.5	146	24.1	31.1
30-60 minutes	73	12.0	67	11.1	14.3
60+ minutes	18	3.0	19	3.1	4.0

Missing	2	0.3	136	22.4	-
Daytime Dysfunction Due to Sleepiness					
Not during the past month	215	35.5	190	31.4	40.1
Less than once a week	263	43.4	191	31.5	40.3
Once or twice a week	107	17.7	80	13.2	16.9
Three or more times a week	21	3.5	13	2.1	2.3
Missing	-	-	132	21.8	-
Sleep Medicine Use					
Not during the past month	413	68.2	323	53.0	68.0
Less than once a week	58	9.6	44	7.3	9.3
Once or twice a week	39	6.4	20	3.3	4.2
Three or more times a week	96	15.8	88	14.5	18.5
Missing	-	-	131	21.6	-
Subjective Sleep Quality					
Very good	87	14.4	72	11.9	15.2

Fairly good	130	21.5	97	16.0	20.4
Uncertain†	247	40.8	183	30.2	38.5
Fairly poor	117	19.3	102	16.8	21.5
Very bad	25	4.1	21	3.5	4.3
Missing	-	-	131	21.6	-
PSQI5					
>5 (poor sleep)	381	62.9	298	49.2	63.9
0-5 (good sleep)	225	37.1	168	27.7	36.1
Missing	-	-	140	23.1	-
PSQI8					
>8 (poor sleep)	192	31.7	163	26.9	35.0
0-8 (good sleep)	414	68.3	303	50.0	65.0
Missing	-	-	140	23.1	-
<i>PSQI (mean, SD)</i>	<i>6.93</i>	<i>3.95</i>	<i>7.12</i>	<i>4.03</i>	-
^N and % for scored category of each variable, except for specially indicated variables to present mean and std.					

†Uncertain indicates uncertainty between fairly good and fairly poor.

Supplementary Table 2. Patient Characteristics at Baseline (N = 486)

Baseline Demographic Variables	All women (N = 486)	PSQI ≤ 8 (n = 147)	PSQI > 8 (n = 329)	P-value
	mean ± standard deviation (SD) (range)	mean ±SD (range)	mean ±SD (range)	
Age (of diagnosis) * (Years)	56.4±10.5 (27-84)	56.6±10.3 (32-80)	55.6±10.8 (27-84)	0.303
BMI	29.3±6.9 (16-71)	28.9±6.8 (18-60)	30.0±7.0 (17-53)	0.089
	Frequency (%)	Frequency (%)	Frequency (%)	
Age (of diagnosis) * (Years)				0.216
< 50	130 (26.7)	85 (25.8)	43 (29.3)	
≥ 50	356 (73.3)	244 (74.2)	104 (70.7)	
BMI				0.109
Under weight (BMI< 18.5)	1 (0.2)	0 (0.0)	1 (0.7)	

Healthy weight ($18.5 \leq \text{BMI} < 25$)	151 (32.9)	112 (36.1)	35 (25.2)	
Overweight ($25 \leq \text{BMI} < 30$)	126 (27.5)	80 (25.8)	44 (31.7)	
Obesity ($\text{BMI} \geq 30$)	181 (39.4)	118 (38.1)	56 (40.1)	
Missing	27 (5.6)	19 (5.8)	8 (5.4)	
Education				0.275
Grade school/some high school	7 (1.5)	2 (0.6)	5 (3.5)	
High school grad/GED	101 (21.7)	73 (23.3)	28 (19.9)	
Some college	155 (33.3)	95 (30.4)	55 (39.0)	
College grade (4 year)	105 (22.6)	76 (24.3)	27 (19.1)	
Advanced degree	96 (20.6)	67 (21.4)	26 (18.4)	
Missing	21 (4.3)	16 (4.9)	6 (4.1)	
Household Income				0.001
< \$10,000	9 (2.2)	3 (1.1)	6 (4.7)	

\$10,000–\$24,999	54 (12.9)	26 (9.2)	26 (20.5)	
\$25,000–\$49,999	102 (24.4)	67 (23.8)	32 (25.2)	
\$50,000–\$74,999	98 (23.4)	70 (24.8)	26 (20.5)	
\$75,000 or more	155 (37.1)	116 (41.1)	37 (29.1)	
Missing	68 (14.0)	47 (14.3)	20 (13.6)	
Race				0.531
Black	15 (3.2)	9 (2.9)	6 (4.3)	
Other	12 (2.6)	7 (2.2)	5 (3.5)	
White	437 (94.2)	297 (90.3)	130 (92.2)	
Missing	22 (4.5)	16 (4.9)	6 (4.1)	

abbreviations. PSQI, Pittsburgh Sleep Quality Index; BMI, body mass index; GED, graduate education degree,

Wilcoxon rank-sum test was used to compare a numeric variable or ordinal categorical variable between the two PSQI groups.

Pearson chi-squared test was used to compare a nominal categorical variable between the two PSQI groups

Supplementary Table 3. Patient Clinical Information at Baseline (N = 486)

Baseline Demographic Variables	All women (N = 486)	PSQI ≤ 8 (n = 147)	PSQI > 8 (n = 329)	P-value
	mean ± (SD) (range)	mean ±SD (range)	mean ±SD (range)	
Well differentiated	118 (27.5)	82 (28.4)	32 (24.2)	
Moderately differentiated	187 (43.6)	121 (41.9)	63 (47.7)	
Poorly differentiated	123 (28.7)	85 (29.4)	37 (28.0)	
Undifferentiated/Anaplastic	1 (0.2)	1 (0.3)	0 (0.0)	
Missing	57 (11.7)	40 (12.2)	15 (10.2)	
Cancer Stage				0.786
0	86 (16.6)	55 (16.8)	22 (15.1)	
1	256 (53.0)	169 (51.7)	82 (56.2)	
2	112 (23.2)	78 (23.9)	33 (22.6)	
3	30 (6.2)	20 (6.1)	9 (6.2)	

4	4 (1.0)	5 (1.)	0 (0.0)	
Missing	3 (0.6)	2 (0.6)	1 (0.7)	
Estrogen Status				0.457
Positive	383 (80.0)	261 (79.3)	115 (80.4)	
Negative	90 (19.0)	60 (18.2)	28 (19.6)	
Missing	13 (2.7)	8 (2.4)	4 (2.4)	
Chemotherapy				0.270
No	300 (61.7)	199 (60.5)	94 (63.9)	
Yes	186 (38.3)	130 (39.5)	53 (36.1)	
Hormonal Therapy				0.543

No	123 (25.3)	83 (25.2)	37 (25.2)	
Yes	363 (74.7)	246 (74.8)	110 (74.8)	
Radiation Therapy				0.104
No	134 (26.6)	83 (25.2)	46 (31.3)	
Yes	352 (72.4)	246 (74.8)	101 (68.7)	

abbreviations. PSQI, Pittsburgh Sleep Quality Index; SD, standard deviation.

Wilcoxon rank-sum test was used to compare a numeric variable or ordinal categorical variable between the two PSQI groups.

Pearson chi-squared test was used to compare a nominal categorical variable between the two PSQI groups.