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# The psychological impact of therapeutic changes during the COVID-19-lockdown for gynaecological and breast cancer patients

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► **To cite this version:**

Gery Lamblin, G Chene, E Leane, C A Philip, S Moret, et al.. The psychological impact of therapeutic changes during the COVID-19-lockdown for gynaecological and breast cancer patients. *Journal of Gynecology Obstetrics and Human Reproduction*, 2022, 51 (3), pp.102311. 10.1016/j.jogoh.2022.102311 . hal-04034674

**HAL Id: hal-04034674**

**<https://hal.science/hal-04034674>**

Submitted on 22 Jul 2024

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1 **The psychological impact of therapeutic changes during the COVID-19-**  
2 **lockdown for gynaecological and breast cancer patients**

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6  
7 **Keywords:** COVID-19 pandemic; SARS-CoV-2; psychological symptoms;  
8 gynaecological cancer; breast cancer

9  
10 **ClinicalTrials** (N° NCT04351139)

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31

32 **All authors saw and approved the final version**

33 **Funding:** none

34 **Conflicts of interest:** none

35

36 **Contribution to authorship: each author's contribution to the Manuscript**

37

38 **Gery Lamblin:** Project development, Manuscript writing, Editing

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47

48 **The final version of this paper was read and approved by all authors.**

49 **Funding:** none

50 **Conflicts of interest:** none

51

52 **Word count:**

53 **Abstract:** 294 words

54 **Text:** 2900 words

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## 60 **Abstract**

61

### 62 **Objective**

63 The exceptional health situation related to the Coronavirus 2019 (COVID-19)  
64 pandemic has required an in-depth and immediate reorganisation of gynaecological  
65 cancer care. The main objective was to assess the psychological impact of such  
66 treatment modifications during the lockdown period for gynaecological and breast  
67 cancer patients.

### 68 **Patients and methods**

69 A multicentre prospective study was conducted in three university gynaecological  
70 cancer wards (*Hospices Civils de Lyon, France*) during the French first lockdown  
71 (16<sup>th</sup> March to 11<sup>th</sup> May 2020). All patients with non-metastatic breast cancer or  
72 gynaecological cancer were included. Data was collected regarding treatment  
73 modifications (delay, cancellation, change of therapeutic plan). The psychological  
74 impact of treatment modifications during and after the lockdown was assessed by  
75 validated questionnaires (SF-12, EORTC-QLQ-C30, HADS).

### 76 **Results**

77 A total of 205 consecutive patients were included, aged  $60.5 \pm 1.0$  years. Seven  
78 patients (3.4%) presented a SARS-CoV-2 infection, and two patients died. Treatment  
79 was maintained for 122 (59.5%) patients, postponed for 72 (35.1%) and cancelled for  
80 11 (5.4%). During the lockdown, 35/118 (29.7%) patients suffered from confirmed  
81 anxiety and the mean fatigue-EORTC score was  $48.00 \pm 2.51$ ; it was  $38.64 \pm 2.33$   
82 ( $p=0.02$ ) after the lockdown. After the lockdown and compared to the lockdown  
83 period, the mental SF-12 score and overall health status EORTC score were  
84 significantly higher ( $45.03 \pm 1.06$  vs  $41.71 \pm 1.15$ ,  $p = 0.02$  and  $64.58 \pm 1.66$  vs  $57.44$   
85  $\pm 2.02$ ,  $p=0.0007$ , respectively). The number of confirmed-anxiety cases was  
86 significantly higher among patients for whom treatment was delayed or cancelled  
87 (40.5% vs 23.7%,  $p=0.04$ ).

### 88 **Conclusion**

89 This study quantified the treatment modifications of gynaecological cancer patients  
90 during the COVID-19 lockdown and revealed a poorer psychological state and quality  
91 of life during this period, even for patients whose treatment plan was not actually

92 modified. Anxiety was more significant in patients with a delayed or cancelled  
93 treatment.

94

95

## 96 **Introduction**

97

98 The Coronavirus disease 2019 (COVID-19) pandemic has caused an exceptional  
99 health crisis in most countries during the first semester of 2020. The World Health  
100 Organisation (WHO) described this pandemic on the 16<sup>th</sup> March 2020 as a “public  
101 health emergency of international concern” [1]. SARS-CoV-2 infection causes benign  
102 symptoms in most cases but can have more serious consequences on vulnerable  
103 people. Cancer patients have a 5-time higher risk of developing a severe form of  
104 SARS-CoV-2 infection compared to the general population, as well as a 8-time  
105 higher risk of COVID-19-related death [2,3], and a 3-time higher risk of being infected  
106 with SARS-CoV-2 [2-4].

107 In France, a first lockdown of the population was established from March 16<sup>th</sup> to May  
108 11<sup>th</sup> 2020 in order to face the pandemic and restrict human contacts and travels [5]. A  
109 state of health emergency was also declared on March 24<sup>th</sup> and all non-urgent  
110 medical and surgical activities were suspended: the three objectives were to  
111 preserve health resources, to avoid exposing vulnerable patients and patients with  
112 comorbidities to a SARS-COV-2 infection, and to ensure appropriate care for cancer  
113 patients [5,6].

114 Consequently, the exceptional context added to the saturation of intensive care units  
115 led to a prompt large-scale reorganisation and adaption of care, affecting  
116 gynaecologic and breast cancer patients [7]. Learned societies issued guidelines in  
117 order to help physicians in their decisions, keeping in mind the ultimate objective of  
118 limiting the loss of chance for cancer patients [8-10]. Our primary objective was to  
119 conduct a study to quantify the proportion of gynaecological and breast cancer  
120 patients whose treatment was delayed or cancelled [10]. In a previous study led in  
121 our group, treatment was maintained for 122 (59.5%) patients, postponed for 72  
122 (35.1%), and cancelled for 11 (5.4%) [11]. At the same time, the mental health of the  
123 general population was significantly impacted by the pandemic situation, and higher  
124 levels of anxiety and depressive or psychotic symptoms were observed in numerous  
125 countries during the lockdowns [12-14]. Cancer patients present high risks in terms of

126 poor mental health during the pandemic [13-18], but only few studies have analysed  
127 the effect of treatment postponement or cancellation for women with gynaecologic  
128 cancer [11,19].

129 Our secondary objective was to assess the impact of the lockdown on the  
130 psychological state and quality of life of gynaecologic cancer patients, related to  
131 modifications in their treatment schedule.

132

133

## 134 **Patients and Methods**

135

136 The present study was prospective, multicentric, and led in three public gynaecologic  
137 oncology wards (*Hôpital Femme Mère Enfant, Centre Hospitalier Lyon Sud, and*  
138 *Hôpital de la Croix Rousse* from the *Hospices Civils de Lyon, France*). It was  
139 approved by the local ethics committee (*Comité de Protection des Personnes Sud*  
140 *Méditerranée III, 2020.04.12 bis-20.04.10.57939*). All patients received an  
141 information note and none refused to participate in the study. The study was  
142 registered on ClinicalTrials (NCT04351139).

143 The inclusion criteria were: being  $\geq 18$ , having a gynaecologic cancer (non-metastatic  
144 breast, uterine, ovarian, cervical, vaginal, or vulvar cancer) whose therapeutic  
145 management was planned during the first French lockdown period, and not being  
146 opposed to participating in the study. Inclusions took place during the first French  
147 lockdown period, i.e. from March 16<sup>th</sup> to May 11<sup>th</sup> 2020. All the patients who  
148 underwent a surgical procedure had to fill a questionnaire investigating the presence  
149 of potential COVID-19 symptoms on the day prior to the surgery. The exclusion  
150 criteria were: not being able to understand the information provided, being deprived  
151 of liberty, being under guardianship. The control group was composed of patients for  
152 whom treatment was not postponed during the first lockdown, i.e. for whom the  
153 lockdown had no direct impact on the management of their therapeutic care.  
154 Postponement was defined as a modification of the expected delay of care, and this  
155 information was systematically registered in the medical file during the first lockdown.  
156 Therefore, this definition refers to the occurrence of a modification of treatment.  
157 Tumours were classified according to their WHO histologic type [20]. Data regarding  
158 treatment approaches were collected (surgery, radiotherapy, chemotherapy,  
159 hormone therapy), both intended and actually administered, as well as the date of

160 treatment initiation as initially planned, the actual date of treatment initiation, the  
161 delay between them, and the reason for delaying treatment initiation.

162 The questionnaires were sent by electronic mail during the lockdown period in March  
163 2020, and after the lockdown in June 2020, regardless of the scheduled/actual date  
164 of treatment of each patient. Patients had until June 30<sup>th</sup> 2020 to return the first  
165 questionnaire and until September 30<sup>th</sup> 2020 to return the second questionnaire.

166 The primary outcome was the comparison of quality of life scores and psychological  
167 results between patients whose treatment was delayed/cancelled and patients whose  
168 treatment proceeded as initially planned. The psychological state of patients was  
169 assessed using validated questionnaires: the SF-12 (short form-12) questionnaire  
170 assessed the general quality of life (general physical and mental health), the EORTC  
171 (European organisation for research and treatment of cancer)-QLQ-C30  
172 questionnaire assessed the cancer-related quality of life, the HADS (hospital anxiety  
173 and depression scale) assessed anxiety and depression levels [21-23]. The EORTC-  
174 QLQ C30 questionnaire was composed of 30 items and 3 scales (functional,  
175 symptomatic, overall quality of life) wherein each item was scored from 0 to 100. The  
176 HADS was composed of 7 anxiety-related items and 7 depression-related items,  
177 scoring for each item ranged from 0 to 3; a sub-score  $\leq 7$  corresponded to an  
178 absence of anxiety/depression, a score  $\geq 8$  and  $\leq 10$  corresponded to a probable  
179 anxiety/depression, and a score  $\geq 11$  (maximum=21) corresponded to confirmed  
180 anxiety/depression.

181

## 182 **Statistical analyses**

183

184 Statistical analyses were performed using the statistical software SAS (SAS Studio  
185 3.6; SAS Institute Inc.). Continuous quantitative variables were expressed as mean  
186  $\pm$ standard deviation (SD) and compared using the Student t-test. Qualitative  
187 variables were expressed as count (percentage) and compared using a  $\chi^2$  test or  
188 Fisher's exact test in case the sample size was  $< 5$ . Comparisons between lockdown  
189 and post-lockdown data were performed using the Student t-test for paired series for  
190 quantitative variables and the McNemar test for qualitative variables. A p-value  $< 0.05$   
191 was considered statistically significant.

192

193 **Results**

194

195 A total of 205 patients were included, their mean age was  $60.5 \pm 1.0$  years. Seven  
196 (3.4%) were diagnosed with COVID-19 (one diagnosis was confirmed by SARS-CoV-  
197 2-specific RT-PCR, two were confirmed by SARS-CoV-2-specific RT-PCR and chest  
198 scan, four were solely based on symptoms).

199 Among the COVID-19-positive patients, two required hospitalisation in a COVID-19  
200 unit and none required admission in intensive care unit. During the study period, two  
201 patients died: a breast cancer patient from severe respiratory distress and a uterine  
202 cancer patient from hypoxic cardiac arrest. In both cases, a COVID-19 diagnosis was  
203 suspected but not confirmed.

204 Among the 205 patients included, 132 (64.4%) had breast cancer, 31 (15.1%) uterine  
205 cancer, 24 (11.7%) ovarian cancer of which 14 (58.3%) were stage III, 13 (6.3%)  
206 cervical cancer, and 5 (2.4%) vulvar cancer (Table 1). Treatment initiation was  
207 unchanged for 122 (59.5%) patients, delayed for 72 (35.1%), and cancelled for 11  
208 (5.4%). The mean delay between the initially-planned and actual dates of treatment  
209 initiation was  $37 \pm 3$  days.

210 The mean delay between the initially-planned and actual dates of surgical  
211 interventions was  $42 \pm 4$  days. The reasons for delaying surgery were related to  
212 organisation for 27 (67.5%) procedures, patient request for 6 (15.0%), and health  
213 issues for 7 (17.5%): one cardiac issue, one breast haematoma, two patients of  
214 advanced age, one delay in node biopsy results, one patient continuing  
215 chemotherapy, and one COVID-19 positive patient.

216 Among 7 cancelations, 4 were related to the frailty of patients who had important co-  
217 morbidities (and 2 of them were COVID-19 positive), 2 were related to the  
218 progression of cancer that rendered the concerned patients non-eligible for surgery,  
219 and 1 was due to the death of the patient that occurred before the planned date of  
220 surgery (this patient had a suspected but not confirmed COVID-19 diagnosis).

221 The mean delay between the initially-planned and actual dates of radiotherapy  
222 treatment initiation was  $36 \pm 5$  days. The reasons for delaying radiotherapy were  
223 related to organisation for 16 (69.6%) cases, patient request for 2 (8.7%), and health  
224 issues for 5 (21.7%).

225 A total of 56 chemotherapy treatments were initially planned, of which 8 (14.3%)  
226 were delayed (Table 2). The mean delay between the initially-planned and actual



227 dates of chemotherapy treatment initiation was  $21 \pm 3$  days. The reasons for delaying  
228 chemotherapy were related to organisation for 3 (37.5%) cases, patient request for 1  
229 (12.5%), and health issues for 4 (50.0%).

230 Among the 205 patients included, 125 filled a questionnaire regarding their cancer  
231 and any treatment postponement during the lockdown period. The characteristics of  
232 the patients who fulfilled this questionnaire are detailed in Table 3. Compared to  
233 those who did not answer, they were significantly younger, with breast localisation,  
234 and without delay in their treatment.

235 During the lockdown period, the mean physical-SF-12 score was  $38.98 \pm 0.80$  vs  
236  $40.11 \pm 0.77$  after the lockdown ( $p=0.30$ ) and the mean mental-SF-12 score was  
237  $41.71 \pm 1.15$  vs  $45.03 \pm 1.06$ ,  $p=0.02$  for the 125 patients who answered the  
238 questionnaires..

239 The mean anxiety-HAD score was  $7.95 \pm 0.44$  during the lockdown, vs  $7.21 \pm 0.37$   
240 after the lockdown ( $p=0.07$ ). During the lockdown period, out of 118 responses, 35  
241 (29.7%) patients suffered from confirmed anxiety and 63 (53.4%) did not report any  
242 anxiety. Post-lockdown, the mean depression-HAD score was significantly lower  
243 compared to the lockdown period (post-lockdown:  $5.59 \pm 0.38$ , lockdown:  $6.49 \pm 0.44$ ,  
244  $p=0.005$ ).

245

246 Post-lockdown, the mean overall-health-status-EORTC score (post-lockdown:  $64.58$   
247  $\pm 1.66$ , lockdown:  $57.44 \pm 2.02$ ,  $p=0.0007$ ), as well as the mean physical-functioning-  
248 EORTC score ( $76.28 \pm 1.91$  vs  $72.06 \pm 2.19$ ,  $p=0.02$ ), and the mean social-  
249 functioning-EORCT score ( $77.01 \pm 2.54$  vs  $68.99 \pm 3.03$ ,  $p=0.04$ ) were higher  
250 compared to the lockdown period.

251 Conversely, the mean fatigue-EORCT score (post-lockdown:  $38.64 \pm 2.33$ , lockdown:  
252  $48.00 \pm 2.51$ ,  $p=0.02$ ), as well as the mean nausea-and-vomiting-EORCT score ( $4.25$   
253  $\pm 1.01$  vs  $11.20 \pm 1.61$ ,  $p=0.0002$ ), the mean appetite-loss-EORCT score ( $12.41 \pm 2.10$   
254 vs  $22.93 \pm 2.74$ ,  $p=0.004$ ), and the mean diarrhoea-EORTC score ( $5.15 \pm 1.15$  vs  $9.76$   
255  $\pm 2.03$ ,  $p=0.04$ ) were lower after the lockdown compared to the lockdown period  
256 (Table 4).

257 Patients with breast cancer were the most affected by a postponement of treatment  
258 (47 patients out of the 72 patients with postponement, i.e. 65.3%). Most often, it was  
259 ductal breast cancer (39/47 patients), stage T1 (20/47 patients), and stage NO (27/47

260 patients). For these patients, the comparison of scores during and after the lockdown  
261 showed no significant difference.

262 There was no significant difference regarding the psychological state between  
263 patients whose treatment was delayed/cancelled vs unchanged during the lockdown  
264 period, except for a higher number of patients suffering from confirmed anxiety  
265 among those for whom treatment was delayed/cancelled (18/76 [23.7%] vs 17/42  
266 [40.5%],  $p=0.04$ ; Table 5).

267

268

## 269 **Discussion**

270

271 The extraordinary health situation stemming from the COVID-19 pandemic required  
272 an in-depth reorganisation of the gynaecological oncology care pathway. It resulted  
273 in psychological repercussions such as social isolation, financial loss, and greater  
274 anxiety [14,18,24]. However, little data are available regarding the actual impact of  
275 such reorganisation on patients' psychological state, justifying the relevance and  
276 interest of our study. First, we reported a delay or cancellation of treatment for nearly  
277 40% of gynaecological cancer patients. Second, our results showed poorer mental  
278 health-related quality of life and poorer cancer-related quality of life, higher levels of  
279 anxiety and depressive symptoms during the lockdown period compared to the post-  
280 lockdown period. Third, we found significantly higher levels of anxiety in patients for  
281 whom treatment was delayed or cancelled, but no difference in the quality of life or  
282 depressive symptoms, compared to those for whom treatment was maintained.

283 In France, the *Haut Conseil de Santé Publique* issued guidelines regarding the care  
284 of gynaecological cancer patients in the COVID-19 pandemic context, and several  
285 learned societies have issued recommendations aiming at reconciling these  
286 guidelines while taking into account the specific constraints related to each hospital  
287 [6,10].

288 In our cohort, treatment was maintained for 59.5% of patients, delayed for 35.1%,  
289 and cancelled for 5.4% [11]. Treatments, mostly surgery and radiotherapy, were  
290 postponed rather than cancelled. De Joode *et al.* have recently published similar  
291 results, as 30% of oncological treatments or follow-up were postponed [25].

292 Consistent with the results reported in previous studies [17,19], our prospective study  
293 showed significantly more patients suffering from anxiety if their treatment had been

294 postponed/cancelled. Moreover, significant differences in quality of life parameters  
295 and psychological state observed during the lockdown were reduced after the  
296 lockdown period.

297 From a survey led in May 2020, Gultekin *et al.* reported that about 2 in 10 cancer  
298 patients were more concerned about COVID-19 than their own cancer condition,  
299 especially for patients over 70 years [19]. Additionally, about 7 in 10 patients were  
300 preoccupied by the progression of their cancer in case of treatment  
301 delay/cancellation and a similar proportion declared not having received any  
302 information [19]. Considering this study and ours, it seems that many patients were  
303 anxious about receiving treatment during the lockdown, regardless of what may have  
304 been done to maintain the schedule. Treatment modifications during the pandemic  
305 period and concerns about not being followed-up by their usual physician were  
306 predictive factors for patient anxiety in a multivariate analysis [19]. Swainston *et al.*  
307 focused on women with breast cancer in the UK, reporting a significant association  
308 between cancer care disruption and higher levels of anxiety and depression [17].  
309 Interestingly, we found no significant association between depression and care  
310 postponement, unlike with anxiety. This result may be partly explained by the  
311 variation across countries in depression rates observed during the COVID-19  
312 pandemic and mainly related to the promptness of governmental responses, which  
313 occurred earlier in France compared to the UK [12].

314 A US survey conducted on ovarian cancer patients found anxiety associated with  
315 delays in cancer care in a multivariate analysis, but the biggest concern was a  
316 potential COVID-19 infection [26].

317 Wang *et al.* investigated 6,213 cancer patients, about a quarter suffered from  
318 depression, 2 in 10 from anxiety, and 1 in 10 from post-traumatic stress [27].  
319 Excessive alcohol consumption, worry about cancer management, fatigue, and pain  
320 were factors associated with mental health disorders, though only 1.6% patients did  
321 seek psychological help during the pandemic period [27]. Evaluating psychological  
322 distress, promoting home physical conditioning, and favouring online connections  
323 with relatives appeared to be essential to better the psychological well-being of  
324 cancer patients during this extraordinary period.

325

326 Romito *et al.* reported that among 77 chemotherapy-treated lympho-proliferative-  
327 cancer patients, about a third suffered from anxiety, depression, and/or post-

328 traumatic stress [28]. Women and younger patients were the most affected by  
329 anxiety and post-traumatic stress [28]. Lou *et al.* found that patients undergoing anti-  
330 cancer treatments were more afraid of being infected with SARS-CoV-2 and had  
331 significantly more elevated stress levels due to the pandemic context compared to  
332 recovered cancer patients and healthy controls [29].

333 We found that the mental health was poorer during the lockdown than in the  
334 aftermath. In a recent meta-analysis, Prati & Mancini *et al.* reported that COVID-19  
335 lockdowns had a small impact on mental health and found no moderating effect by  
336 age or gender [13]. This would therefore suggest that women with gynaecological  
337 cancer may represent a high-risk population for impaired mental health during the  
338 COVID-19 pandemic. Consistently, Haesebaert *et al.* recently reported that disability  
339 was a risk factor for poorer well-being during the lockdown in France [30]. The  
340 COVID-19 pandemic has been shown to have had a negative impact on the  
341 psychological well-being of cancer patients, as it induced severe anxiety, fear of  
342 infection, and a notable decrease in familial support [27]. Moreover, the social  
343 distancing that was imposed during the pandemic has been shown to be a factor  
344 promoting psychological distress, anxiety, insomnia, and fear of cancer recurrence  
345 [31]. Dedicated prevention strategies are thus needed to better detect and treat  
346 mental health impairments in this population, by optimizing physician-to-patient  
347 communication and offering psychoeducational tools to cope with the pandemic  
348 context [32]. Healthcare workers should also be adequately trained to manage the  
349 well-being and mental health of cancer patients.

350

### 351 **Strengths and limits**

352

353 This study is the first to investigate both the therapeutic and psychological impacts of  
354 the reorganised management of gynaecological cancer patient care during the  
355 COVID-19 pandemic. We were able to analyse the impact of treatment changes on  
356 quality of life and psychological metrics.

357 In terms of limits, the present study did not allow to accurately evaluate the loss of  
358 chance for patients whose care plan was modified, but only to report and quantify  
359 those modifications. Importantly, cancer screening and numerous other aspects of  
360 medical care were delayed/cancelled during the lockdown period, leaving no doubt  
361 that some cancer cases have not been diagnosed or have been diagnosed later than

362 they would have normally been. This represents a critical indirect impact of the  
363 COVID-19 pandemic that has not been quantified herein. Moreover, a selection bias  
364 may have occurred, as the proportion of patients for whom treatment was maintained  
365 was higher among respondents compared to the patients who did not fulfil the  
366 questionnaires. This may impede the generalizability of our results.

367

368

## 369 **Conclusion**

370

371 This study showed that during the first COVID-19 lockdown, treatment was  
372 maintained for 60% of gynaecological cancer patients, delayed for 35%, and  
373 cancelled for 5%. Quality of life and psychological state were impaired during the  
374 lockdown for patients with an ongoing oncological treatment, and not after the  
375 lockdown. Gynaecological cancer patients did express a certain anxiety regarding  
376 modifications of their treatment plan. Healthcare providers should be aware of the  
377 impact of such modifications (even though crisis-driven) and develop initiatives to  
378 better communicate with patients. This study will hopefully provide insights for a  
379 better management of potential new COVID-19 pandemic episodes or any other  
380 future health crisis.

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**Table 1. Gynaecological cancer characteristics (n = 205)**

<b>Histological type</b>	<b>Total</b>	
<b>Breast (n = 132)</b>		
<b>No special type</b>		108 (81.8%)
Lobular		17 (12.9%)
Other		7 (5.3%)
TNM/ FIGO stage	Tis	10 (7.6%)
	T1	54 (41.2%)
	T2	50 (38.2%)
	T3	13 (9.9%)
	T4	4 (3.1%)
	N0	73 (59.8%)
	N1	33 (27.1%)
	N2	16 (13.1%)
<b>Uterine (n = 31)</b>		
	Type 1 ADK*	13 (41.9%)
	Type 2 ADK*	13 (41.9%)
	Other	5 (16.1%)
TNM/ FIGO stage	I	17 (54.8%)
	II	2 (6.4%)
	III	6 (19.3%)
	IV	6 (19.3%)
<b>Ovarian (n = 24)</b>		
	High-grade serous ADK*	14 (58.3%)
	Low-grade serous ADK*	1 (4.2%)
	Other	9 (37.5%)
TNM/ FIGO stage	I	5 (20.8%)
	II	1 (4.2%)
	III	14 (58.3%)
	including IIIC	11 (45.9%)
	IV	4 (16.7%)
<b>Cervical (n = 13)</b>		
	Adenocarcinoma	6 (46.2%)
	Squamous cell carcinoma	6 (46.2%)
	<i>In situ</i>	1 (7.7%)
<b>TNM/ FIGO stage</b>	<b>I</b>	<b>6 (46.1%)</b>
	<b>II</b>	<b>4 (30.8%)</b>
	<b>III</b>	<b>1 (7.7%)</b>
	<b>IV</b>	<b>1 (7.7%)</b>
	<b>Cis</b>	<b>1 (7.7%)</b>
<b>Vulvar (n = 5)</b>		
	Squamous cell carcinoma	4 (80.0%)
	Other	1 (20.0%)
TNM/ FIGO stage	I	3 (60.0%)
	II	1 (20.0%)
	III	1 (20.0%)
	IV	0

\*ADK : adenocarcinoma

Data expressed as count (percentage).

Classifications used: breast, TNM 8<sup>th</sup> edition from the American Joint Committee on Cancer, 2017; uterine, FIGO 2009; ovarian, FIGO 2013; cervical, FIGO 2009; vulval, FIGO 2009.

**Table 2. Treatment modifications during the first lockdown (n = 205 patients and 242 treatments)**

	Surgery	Chemotherap y	Radiotherap y	Hormone therapy	Total
Initiated/perfor med as planned	68 (59.1)	46 (82.1)	33 (55.9)	10 (83.3)	157
Delayed	40 (34.8)	8 (14.3)	24 (40.7)	2 (16.7)	74
Cancelled	7 (6.1)	2 (3.6)	2 (3.4)	0 (0.0)	11
Total	115	56	59	12	242

Data expressed as count (percentage).

**Table 3. Characteristics of patients who filled or did not fill the questionnaire**

	Answer n =125	No answer n = 80	p
Age in years	58.61 +/- 1.25	63.65 +/- 1.80	0.02
Cancer localisation			
Cervix	7 (5.60%)	6 (7.50%)	
Ovary	9 (7.20%)	15 (18.75%)	
Breast	89 (71.20%)	43 (53.75%)	
Endometrium	18 (14.40%)	13 (16.25%)	
Vulva	2 (1.60%)	3 (3.75%)	0.05
Treatment			
Initiated/performed as planned	80 (64.00%)	42 (52.50%)	
Delayed	42 (33.60%)	30 (37.50%)	
Cancelled	3 (2.40%)	8 (10.00%)	0.04

Data expressed as count (percentage) or mean  $\pm$  standard deviation.

**Table 4. Comparison of psychological state characteristics during and after the first lockdown**

	Lockdown period n = 125	Post-lockdown period n = 138	p
Physical SF-12 score	38.98 ± 0.80	40.11 ± 0.77	0.30
Mental SF-12 score	41.71 ± 1.15	45.03 ± 1.06	0.02
Anxiety HAD score	7.95 ± 0.44	7.21 ± 0.37	0.07
Anxiety HAD*			
absent	63 (53.4%)	79 (60.3%)	
probable	20 (16.9%)	24 (18.3%)	
confirmed	35 (29.7%)	28 (21.4%)	0.11
Depression HAD score	6.49 ± 0.44	5.59 ± 0.38	0.005
Depression HAD**			
absent	75 (63.0%)	92 (70.2%)	
probable	20 (16.8%)	17 (13.0%)	
confirmed	24 (20.2%)	22 (16.8%)	0.14
EORTC score			
Overall health status	57.44 ± 2.02	64.58 ± 1.66	0.0007
Physical functioning	72.06 ± 2.19	76.28 ± 1.91	0.02
Role functioning	73.60 ± 2.70	81.03 ± 2.29	0.009
Emotional functioning	67.69 ± 2.50	72.44 ± 2.09	0.14
Cognitive functioning	76.93 ± 2.23	78.38 ± 1.94	0.84
Social functioning	68.99 ± 3.03	77.01 ± 2.54	0.04
Fatigue	48.00 ± 2.51	38.64 ± 2.33	0.02
Nausea and vomiting	11.20 ± 1.61	4.25 ± 1.01	0.0002
Pain	34.00 ± 2.63	29.47 ± 2.42	0.16
Dyspnoea	20.16 ± 2.50	17.04 ± 3.00	0.33
Insomnia	42.13 ± 3.03	36.50 ± 2.84	0.12
Appetite loss	22.93 ± 2.74	12.41 ± 2.10	0.004
Constipation	21.50 ± 2.89	17.28 ± 2.32	0.22
Diarrhoea	9.76 ± 2.03	5.15 ± 1.15	0.04
Financial difficulties	17.34 ± 2.53	13.97 ± 2.32	0.20

Data expressed as count (percentage) or mean ± standard deviation.

Abbreviations: SF-12 = short form-12; HAD = hospital anxiety and depression; EORTC = European organisation for research and treatment of cancer.

**Table 5. Comparison of psychological state according to the presence/absence of treatment modifications**

	Lockdown period (n=125)			Post-lockdown period (n=138)		
	No treatment modification n=80	Delay or cancelation n=45	p	No treatment modification n=89	Delay or cancelation n=49	p
Physical SF-12 score	38.63 ± 1.03	39.60 ± 1.29	0.57	39.46 ± 0.99	41.28 ± 1.24	0.26
Mental SF-12 score	42.71 ± 1.42	39.93 ± 1.95	0.25	45.88 ± 1.30	43.50 ± 1.83	0.28
Anxiety HAD score	7.37 ± 0.50	9.00 ± 0.81	0.07	7.08 ± 0.45	7.44 ± 0.66	0.65
Anxiety HAD*						
absent	41 (53.9%)	22 (52.4%)		52 (62.6%)	27 (56.2%)	
probable	17 (22.4%)	3 (7.1%)		16 (19.3%)	8 (16.7%)	
confirmed	18 (23.7%)	17 (40.5%)	0.04	15 (18.1%)	13 (27.1%)	0.48
Depression HAD score	6.25 ± 0.53	6.91 ± 0.78	0.48	5.31 ± 0.46	6.08 ± 0.68	0.33
Depression HAD**						
absent	49 (64.5%)	26 (60.5%)		63 (75.0%)	29 (61.7%)	
probable	15 (19.7%)	5 (11.6%)		9 (10.7%)	8 (17.0%)	
confirmed	12 (15.8%)	12 (27.9%)	0.21	12 (14.3%)	10 (21.3%)	0.28
EORTC score						
Overall health status	57.90 ± 2.39	56.63 ± 3.72	0.76	65.51 ± 2.14	62.92 ± 2.62	0.45
Physical functioning	71.83 ± 2.81	72.46 ± 3.50	0.89	76.62 ± 2.22	75.65 ± 3.58	0.81
Role functioning	72.50 ± 3.43	75.55 ± 4.39	0.59	82.20 ± 2.65	78.91 ± 4.34	0.49
Emotional functioning	69.72 ± 3.02	64.07 ± 4.40	0.28	73.22 ± 2.44	71.03 ± 3.90	0.62
Cognitive functioning	78.96 ± 2.58	73.33 ± 4.15	0.23	79.77 ± 2.22	75.85 ± 3.70	0.33
Social functioning	67.32 ± 3.83	71.85 ± 4.99	0.47	76.89 ± 3.11	77.21 ± 4.45	0.95
Fatigue	49.58 ± 3.17	45.18 ± 4.09	0.40	38.01 ± 2.82	39.79 ± 4.16	0.72
Nausea and vomiting	10.62 ± 1.86	12.22 ± 3.06	0.64	3.60 ± 0.95	5.44 ± 2.25	0.38
Pain	32.92 ± 3.29	35.92 ± 4.43	0.58	28.46 ± 2.91	31.29 ± 4.34	0.58
Dyspnoea	21.10 ± 3.13	18.52 ± 4.18	0.62	17.05 ± 2.51	17.01 ± 3.78	0.99
Insomnia	41.67 ± 3.68	42.96 ± 5.36	0.84	38.63 ± 3.57	32.65 ± 4.71	0.31
Appetite loss	22.92 ± 3.38	22.96 ± 4.72	0.99	10.98 ± 2.51	14.96 ± 3.77	0.36
Constipation	19.58 ± 3.18	25.00 ± 5.75	0.37	16.09 ± 2.55	19.44 ± 4.64	0.49
Diarrhoea	8.86 ± 2.38	11.36 ± 3.74	0.56	4.98 ± 1.39	5.44 ± 2.03	0.85
Financial difficulties	18.80 ± 3.31	14.81 ± 3.90	0.45	14.94 ± 3.02	12.24 ± 3.60	0.58

Data expressed as n (%) or mean (±standard deviation)