Comparison between PET CT and AGO score for operability evaluation in recurrent ovarian cancer: a retrospective study.

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Objectives:

- to compare positron emission computarized tomography (PET CT) in epithelial recurrent ovarian cancer (ROC) with the validated AGO score to predict the feasibility of secondary cytoreductive surgery (SCS)
- to determine predictive factors of complete cytoreductive surgery and survival.

Material and methods

We conducted a retrospective multi centric study in Curie Institute (2 sites)

All the patients treated for an epithelial ROC were screened and included if they underwent a PET CT before treatment.

We created a PET-CT assesment that rejected surgery if one of the following items was reported: diffuse carcinomatosis, extra-abdominal lesions, and supra-diaphragmatic lymph nodes

An AGO score equal to 3 was considered to support the feasibility of surgery.

Patients characteristics

	Primary surgery (26)	Interval surgery (39)	No surgery (151)	p
Age at recurrence	61.14	61.28	62.93	0.54
Family history of cancer	14	29	99	0.23
Family history of ovarian cancer	5	6	23	0.84
Family history of breast cancer	8	17	61	0.60
Personal history of cancer	6	8	39	0.78
Personal history of breast cancer	6	6	34	0.61
Hormonal substitution for menopause	7	9	40	0.61
BRCA mutation				
Type 1	3	9	21	0.69
Type 2	0	4	11	0.38
FIGO	26	39	150	0.02
Histologie serous	21	34	135	0.08
Grade>1 at diagnosis	21	37	147	0.07
Menopause at diagnosis	21	35	127	0.57
BMI	23.70	23.50	23.53	0.98
Parity	1.46	1.62	1.58	0.87
Active smoker	3	7	25	
CA 125 level at recurrence (mean)	57.6	139.63	430	0.14
Recurrence delay (months)	31.34	28.40	19.21	0.009
Ascite>500mL	0	0	6	0.26
Initial surgery CC0	17	36	109	0.02

OS depending on treatment

OS based on TEP and AGO scores combination

OS on months depending on treatment:

Median survival is 107months with SCS vs 27 without (p= 1.18e-07).

No follow up after 140months for the only chemotherapy group.

Results

546 patients were treated for an epithelial ROC during the study period, among them 216 underwent a PET CT before any treatment.

66patients underwent SCS: complete cytoreduction was achieved in 58 patients (89.2%) and no case of mortality was reported within 60 days post-surgery.

In univariate analysis, the following TEP items were statistically different between the 3 groups: diffuse carcinomatosis (8/19/102 **p=0, 0006**), extra abdominal lesion (7/8/82 **p=0,0001**) and sus-diaphragmatic nodes (4/4/69 **p<0,0001**).

Overall survival was higher in second cytoreduction surgery group than the chemotherapy group.

OS depending on PET and AGO scores combination

OS is 86 months for AGO+/PET+ group, 62 for AGO-/PET+, 39 for AGO+/PET- and 38 for AGO-/PET-.In univariate analysis, AGO score of 3 and PET score of 0 associated were statically associated in OS (p<à,01)

Conclusion

In our series, the positive AGO score remains a predictor of operability in recurrent epithelial ovarian cancer.

However, the PET TDM and its different composite score criteria are more strongly associated with the feasibility of SCC and can be used in combination with the AGO score because the 2 tests remain significant in multivariate. They are complementary.