How does Laparoscopic scoring before Ovarian Cytoreductive surgery perform differently compared to Clinical and Imaging criterion in Low Resource Setting: An Observational Analytical study.

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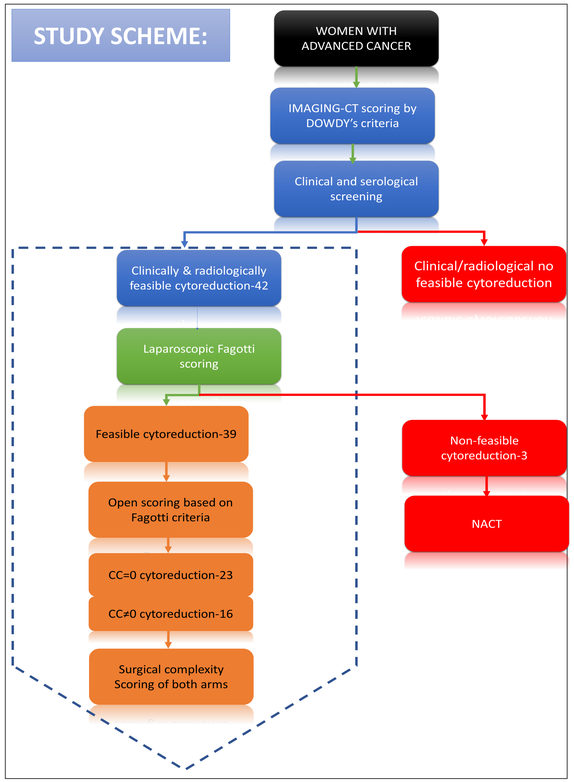
SYNOPSIS

In a low resource setting , when comparing the regularly used criteria for deciding cytoreduction to the laparoscopic scoring which needs additional effort, it is found that laparoscopy does it better. Not only are unnecessary laparotomies and delays in treatment avoided, but also ensures the completeness of the procedure with respect to unsuspected areas. Following a systematic scoring procedure of 15 -20 minutes religiously before all cytoreductions will add to the quality of cytoreduction in these settings

STUDY SCHEME:



BACKGROUND:

The plan for cytoreduction is the first and foremost decision which will weigh on all future directions of the patient. Selection is performed using clinical and serologic criteria, imaging, laparoscopy and surgeon's opinion (tumor board decisions).

OBJECTIVE:

Aim of this study is to find the association between outcome of cytoreductive surgery with serologic markers such as CA-125, imaging modalities such as computed tomography (CT), laparoscopy-based score and surgical complexity score in a low resource setting.

METHODS:

This was designed as an observational analytical study in a cross section of patients with advanced epithelial ovarian cancer undergoing primary cytoreductive surgery with defined inclusion and exclusion criteria. This study included the population accrued between March 2019 and January 2021 at the Department of Gynecologic Oncology of the Acharya Harihar Post Graduate Institute of Cancer, Cuttack, India, regarding the role of laparoscopy in assessing the chance of optimal cytoreductive surgery in patients with advanced ovarian cancer.

RESULTS:

CLINICOPATHOLOGICAL VARIABLE	CC=0	CC≠0
Age	48(24-80)	50(30-69)
Parity	2.43(0-6)	2.81(2-5)
Menopause	43.50%	56.30%
Ca 125	310(38-626)	352(236-802)
CEA	1.8(1-5)	2(0.575-8.5)
CT score(0/1/2)	6-12-5	5-5-6
Fagotti score (lap)	4(2-4)	6(4.5-8)
Open score	4(2-4)	6(4.5-8)
PCI	6(3-9)	9(7-15)
SCS	5(4-5)	4(4-5)

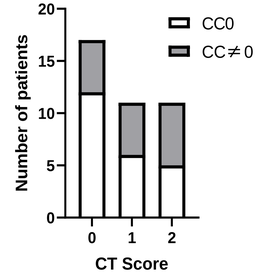
CONCLUSION:

After consideration of the serum markers, CT score model, Laparoscopic and open score models in their ability to predict cytoreduction, it was concluded that Fagotti laparoscopic score has the best concordance with open findings and the best ability to predict completeness of cytoreduction. Further studies with higher patient number will be required to comment on the surgical complexity score's contribution to predicting completion of cytoreduction. It is recommended to consider laparoscopic Fagotti scoring for all patients decided for primary cytoreduction before laparotomy.

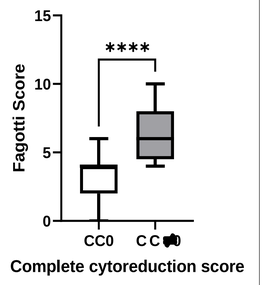
FUTURE DIRECTIONS:

Application of models evaluated in well-resourced settings without being tried out in local settings and expecting the same results and observations may not be the best approach for resource limited countries. Future approaches should always consider the high volume, low resource setting, dealing with a less healthy cohort of people and decide what would be the best for them after evaluation of models in the local settings itself.

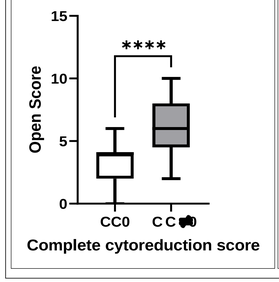
COMPARISON OF CT SCORE IN BOTH GROUPS



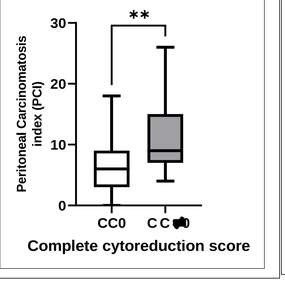
COMPARISON OF FAGOTTI SCORING IN BOTH GROUPS



COMPARISON OF OPEN SCORE IN BOTH GROUPS



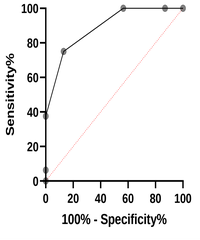
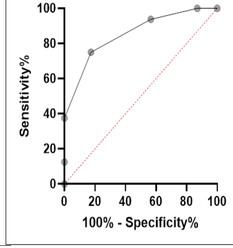
COMPARISON OF PCI IN BOTH GROUPS



MULTIPLE REGRESSION ANALYSIS CONSIDERING AGE, CT SCORE, FAGOTTI SCORE, OPEN SCORE, PCI AND SCS AS INDEPENDENT VARIABLES

Variable	Beta coeffiecient	P value	P value summary
Intercept	0.5656	0.1407	ns
age	-0.003238	0.5401	ns
CT score	-0.0922	0.3027	ns
Fagotti score	**0.2956**	**0.003**	**
open score	-0.1053	0.2107	ns
PCI	-0.01476	0.4338	ns
SCS	**-0.1385**	**0.0199**	*
R Squared = 0.5047			

ROC CURVE FOR FAGOTTI SCORE



ROC CURVE FOR OPEN SCORE