

# CLINICAL STAGING VERSUS OPERATIVE STAGING IN CERVICAL CANCER

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## SUMMARY

The Authors analyse the correlations between clinical staging (FIGO) and surgical staging in 152 patients affected by cervical cancer who underwent primary surgical therapy at the Gynecologic Institute of Padua University between 1974 and 1982. In the examined series clinical staging agrees with surgical staging in 2/3 of cases. The error percentage of clinical staging does not change significantly, from a statistical point of view, when staging varies. In those cases in which the two systems disagree the overstaging figure tends to decrease as staging becomes more severe while the clinical understaging figure tends to increase accordingly.

On the basis of these results the Authors advocate a rational resort to operative staging in cervical cancer so as to evaluate the real topography of the original focus more accurately and plan the most adequate treatment.

Therapeutical programs in cervical cancer usually include surgical or radiotherapeutical interventions or a combination of the two, variously integrated with techniques and sequences of application. Treatment planning and evaluation of results are normally based on the classification into clinical stages codified by the FIGO. But this classification, though providing useful prognostic standards of judgement, has proven to be inadequate to identify specific therapeutical guidances.

Within a single clinical stage different risk factors have been identified which influence prognosis thus determining the therapeutical treatment more than staging itself <sup>(1, 2, 3, 4)</sup>.

Furthermore clinical staging has failed to predict the surgical stage correctly in a significant number of cases and the index of pathologic correction rises progressively as staging grows more severe <sup>(5, 6, 7, 8)</sup>.

Averett <sup>(5)</sup> and Zander <sup>(8)</sup> report 100 per cent error of FIGO staging in stage III. According to the experience of the Gynecologic Oncology Group <sup>(7)</sup> FIGO staging underestimates the disease in 36.2% of cases. These remarks warrant operative staging in cervical cancer since this procedure can change the line of therapeutical conduct significantly, whether primary therapy be surgical or radiant <sup>(5, 9)</sup>.

This study is aimed at assessing the reliability of anatomo-radiosurgical staging (ARCH) on the basis of the experience of the Ostetric-Gynecologic Institute of Padua University.

## MATERIAL AND METHODS

This study concerns 152 previously untreated patients to whom invasive carcinoma of the cervix - stage I b to IV - was diagnosed at the Obstetric and Gynecologic Institute of Padua University between 1974 and 1982. Their general medical conditions and performance status made them eligible for primary surgical therapy. Prior to intervention these patients underwent the standard procedure for FIGO staging (clinical

Table 1. — *Correlation between FIGO and ARCH staging.*

Stage ARCH	Stage FIGO							
	I		II		III		IV	
	A	B	A	B	A	B		
I	A	8	9					17
	B	1	55	1	29			86
II	A		1	7	2	2	3	15
	B		2	6	13	1	3	25
III	A							0
	B			2		4		6
IV						3		3
		9	67	14	46	3	13	152

examination, thorax X-ray, pyelography, cystoscopy, rectoscopy, hematological tests).

Surgical exploration was performed trans-abdominal as integral part of the surgical intervention. Special attention was attached to the parametrial situation and to the findings in pararectal and paravesical areas. Pathological staging in this series was always decided after pathologic examination of the surgical piece.

This study pursues three main objectives:

1) comparing the predictive value of FIGO and ARCH staging;

2) assessing whether FIGO and ARCH classifications are correlated when staging worsens;

3) establishing whether FIGO classification under- or overstages, compared to ARCH, when the two disagree.

## RESULTS

Table 1 shows the distribution of the series according to ARCH and FIGO staging. The second question has been tackled first, being determinant — from a statistical point of view — for the procedure to be followed when studying the remaining two questions. To test this hypothesis of independence table 1 has been re-arranged so as to offer an overall evaluation of the cases, grouped by stage, in which the two classifications agree or disagree (tab. 2). Statistical data processing ( $\chi^2=7.5$ ;  $p<0.05$ ) enables us to conclude that no relation exists between staging

severity and predictive value of FIGO classification compared to ARCH.

This conclusion allows us to proceed and answer the first question. We have re-arranged the series in mounting progression on the basis of FIGO staging (tab. 3). In order to express the described phenomenon in quantitative terms we have calculated a linear regression coefficient which comes very close to 1 ( $z=0.998$ ). Linear regression is therefore a perfect instrument to describe this phenomenon.

The regression coefficient and the overall percentage of variation in the number of concordant cases, close to average (99.6%), suggest that FIGO staging agrees with ARCH staging by an almost constant fraction (about 2/3).

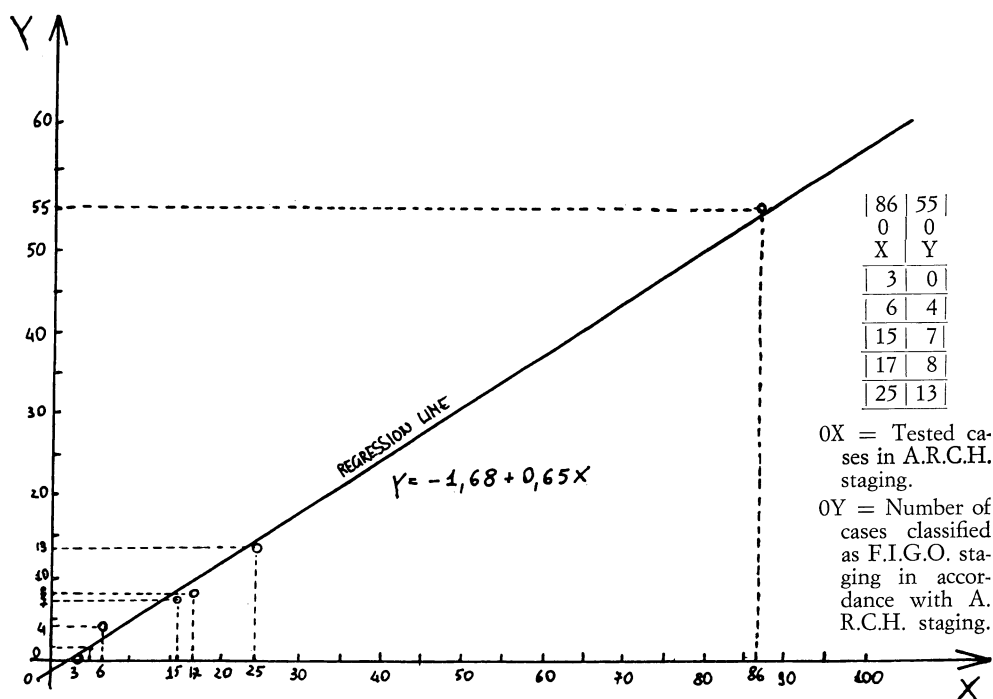
The third question has been tackled by analysing only cases in which the two classifications disagree, on the basis of a pathologic finding of FIGO under- or overstaging compared to ARCH (tab. 4). The table shows a progressive decrease in overestimation figures as staging grows more severe and, logically, a parallel increase in underestimation figures.

In order to establish whether this decrease is linear we have applied a statistical test to estimate the regression deviation from linearity. With a fairly safe margin (95%) the test result confirms

Table 2. — *Correlation between FIGO and ARCH staging.*

Stage		Concordance	Discordance	No. cases
I	A	8	9	17
	B	55	31	86
II	A	7	8	15
	B	13	12	25
III	A	0	0	0
	B	4	2	6
IV		0	3	3
		87	65	152

Table 3.



that the number of cases overstaged by FIGO tends to decrease as staging grows more dangerous.

## CONCLUSIONS

FIGO clinical staging is a useful instrument to assess the evolution of cervico-carcinomas. However the index of correction after ARCH staging shows discrepancy in about 1/3 of cases. In these cases a therapeutical program based on clinical examination exclusively may prove to be inadequate; notably, as the number of overstaged cases has been proven to decrease linearly, the therapeutical program may cause undertreatment in early and over treatment in advanced stages.

Therefore the results of this study warrant a rational resort to operative staging in cervical cancer, whether with surgery

or radiotherapy as primary therapy, to establish the real topography of the original focus more correctly.

This indication is further strengthened by the need to identify lymphatic invol-

Table 4. — *Discordance between FIGO and ARCH staging systems.*

Stage		Less invasive	More invasive	No. cases
I	A	9		9
	B	30	1	31
II	A	7	1	8
	B	4	8	12
III	A	0	0	0
	B	0	2	2
IV		0	3	3
		50	15	65

vement, notably of lombo-aortic nodes, in locally advanced cases since such an occurrence bears a significant influence on the patient's prognosis and possibility of treatment (<sup>10, 11, 12</sup>).

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