

SLN & Lymphadenectomy in early stage cervical cancer

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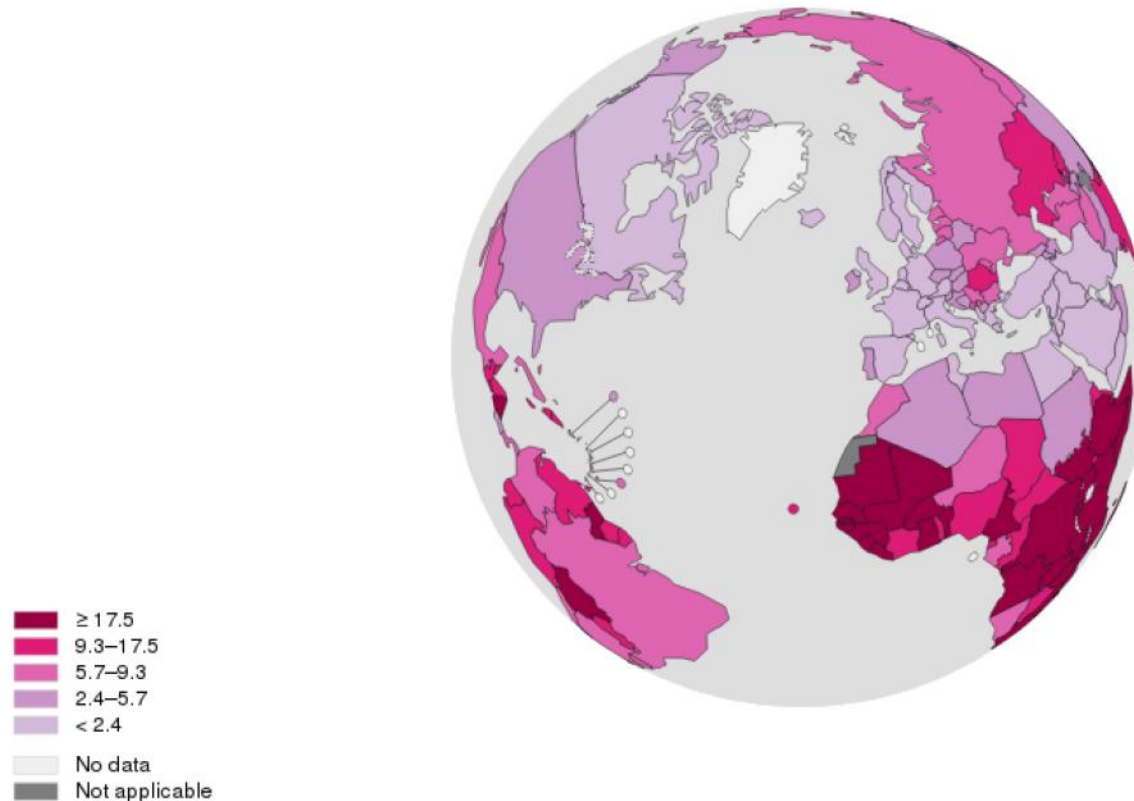
Lausanne University Hospital.

www.cancerologiegynecologique.eu

Gynecologic Cancer InterGroup Cervix Cancer Research Network

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Estimated age-standardized rates (World) of deaths, females, cervical cancer, worldwide in 2012



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Data source: GLOBOCAN 2012
Map production: IARC
(<http://gco.iarc.fr/today>)
World Health Organization



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Research on Cancer 2016

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TABLE 1 FIGO staging of cancer of the cervix uteri (2018).

Stage	Description
I	The carcinoma is strictly confined to the cervix (extension to the uterine corpus should be disregarded)
IA	Invasive carcinoma that can be diagnosed only by microscopy, with maximum depth of invasion <5 mm ^a
IA1	Measured stromal invasion <3 mm in depth
IA2	Measured stromal invasion ≥3 mm and <5 mm in depth
IB	Invasive carcinoma with measured deepest invasion ≥5 mm (greater than Stage IA), lesion limited to the cervix uteri ^b
IB1	Invasive carcinoma ≥5 mm depth of stromal invasion, and <2 cm in greatest dimension
IB2	Invasive carcinoma ≥2 cm and <4 cm in greatest dimension
IB3	Invasive carcinoma ≥4 cm in greatest dimension
II	The carcinoma invades beyond the uterus, but has not extended onto the lower third of the vagina or to the pelvic wall
IIA	Involvement limited to the upper two-thirds of the vagina without parametrial involvement
IIA1	Invasive carcinoma <4 cm in greatest dimension
IIA2	Invasive carcinoma ≥4 cm in greatest dimension
IIB	With parametrial involvement but not up to the pelvic wall
III	The carcinoma involves the lower third of the vagina and/or extends to the pelvic wall and/or causes hydronephrosis or nonfunctioning kidney and/or involves pelvic and/or para-aortic lymph nodes ^c
IIIA	The carcinoma involves the lower third of the vagina, with no extension to the pelvic wall
IIIB	Extension to the pelvic wall and/or hydronephrosis or nonfunctioning kidney (unless known to be due to another cause)
IIIC	Involvement of pelvic and/or para-aortic lymph nodes, irrespective of tumor size and extent (with r and p notations) ^c
IIIC1	Pelvic lymph node metastasis only
IIIC2	Para-aortic lymph node metastasis
IV	The carcinoma has extended beyond the true pelvis or has involved (biopsy proven) the mucosa of the bladder or rectum. (A bullous edema, as such, does not permit a case to be allotted to Stage IV)
IVA	Spread to adjacent pelvic organs
IVB	Spread to distant organs

When in doubt, the lower staging should be assigned.

^aImaging and pathology can be used, where available, to supplement clinical findings with respect to tumor size and extent, in all stages.

^bThe involvement of vascular/lymphatic spaces does not change the staging. The lateral extent of the lesion is no longer considered.

^cAdding notation of r (imaging) and p (pathology) to indicate the findings that are used to allocate the case to Stage IIIC. Example: If imaging indicates pelvic lymph node metastasis, the stage allocation would be Stage IIIC1r, and if confirmed by pathologic findings, it would be Stage IIIC1p. The type of imaging modality or pathology technique used should always be documented.

Source: Bhatla et al.¹⁷

a

ECC: Risk factors of recurrence

- Lymph node metastases**
- Large cervical tumor (>4cm)
- Parametrial extension
- Non squamous histology
- Deep (>75%) stromal invasion
- LVSI

*Fuller A & al 1989
Schorge J & al 1997
Landoni F & al 1997
Lennox G & al 2017*

Prognosis = Nodes

Prognosis is different between N0 et N1 patients (macrometastases)*

Better prognosis in “occult” metastases vs macroscopic

Poorer prognosis with increasing number of nodes, if ≥ 2 (10% 5-year DFS / node)

Prognosis linked to location of nodes (the highest the worst)

Prognosis of N+ depends of parametrial invasion

van Bommel P & al 1987

Delgado G & al 1990

Inoue T & al 1990

Suprasert P & al 2013

Tinga D & al 1990

Tsai C & al 1999

Feature of nodal involvement

5 to 20% patients from Ia1 to IIa have metastatic lymph nodes.

Only **ONE** node is invaded in 35-54.8% of patients pN1

Small size of the metastasis

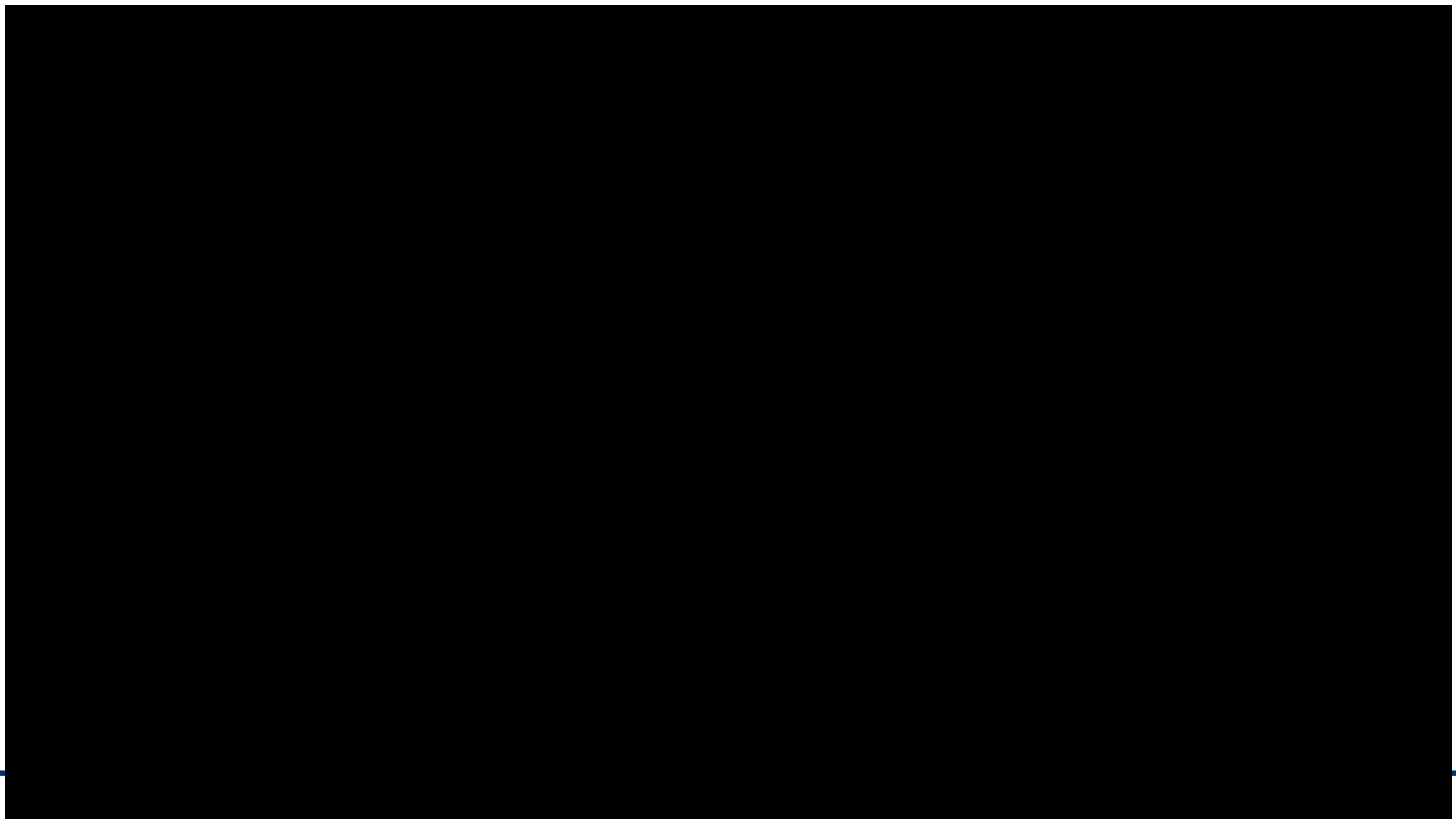
- Median size of metastasis is 1.5 mm
- 22 to 38% measure less than 2mm
- 100% of metastases measure less than 8 mm

*Inoue 1990 Cancer
Benedetti Panici 1996
GynOncol
Lee K 2006 JOGR
Horn 2008 GynOncol
Gortzak Uzan 2010
GynOncol
Achouri 2013 EJSO*

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Lymphadenectomy or SLN ?



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Lymphadenectomy

- ext iliac, obt, hypoG, common iliac, PA?
- >10 nodes to be informative
- lymphedema if >10 nodes
- limited pathologic analysis

SLN

- targeted biopsy
- enhanced pathology
- unexpected locations

- false negative !

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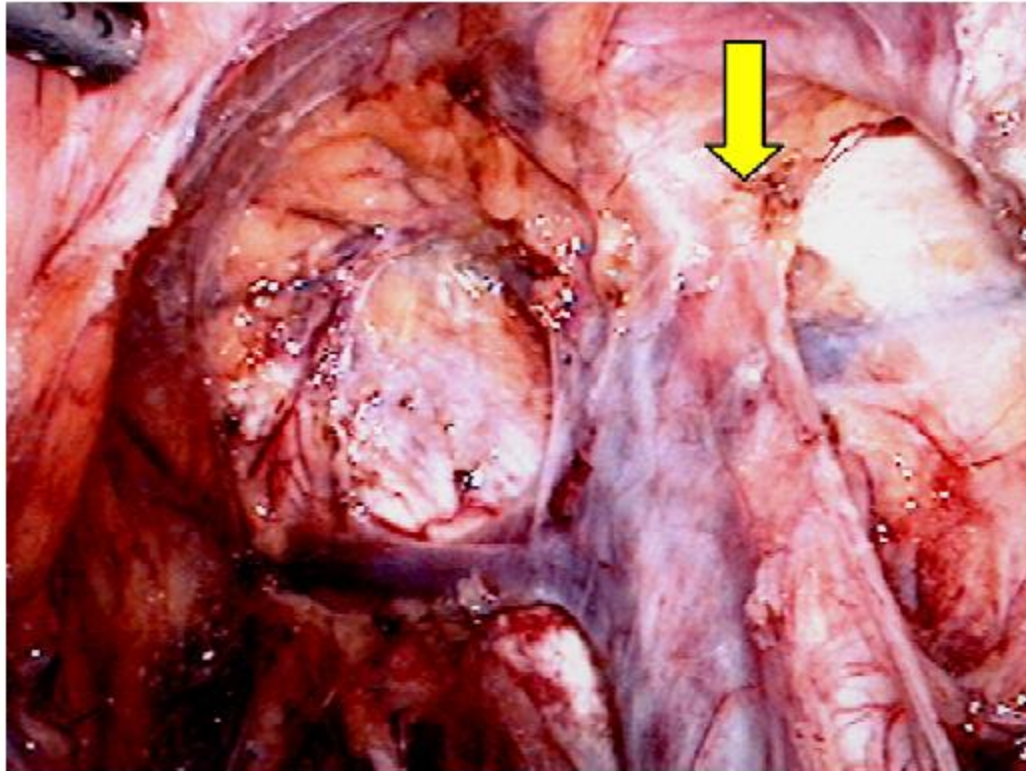


Fig. 1. Location of the right circumflex iliac node (arrow) ventral and caudal to the circumflex iliac vein.
cases of cervical carcinoma.

Sakuragi N & al 1999
Abu Rustum N & al 2007

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SLN

• Location of the SN:	Senticol1	Senticol2
– External iliac/ obturator:	83,5%	85,8%
– Para-aortic + presacral:	5,1%	2,6%
– Common iliac:	8,5%	9,5%
– Parametrium :	2,7%	1,1%

*Lécuru F & al 2011
Mathevet P & al 2016*

To Lower the FN rate

- Stage Ia1 – IIa1
- No suspicious lymph node on pre-operative imaging and per-operative assessment
- Tumour size <40mm
- **Bilateral detection**
- **MSKCC algorithm**



FN rate: 1/1257 (0.08%)

Tax C & al 2015

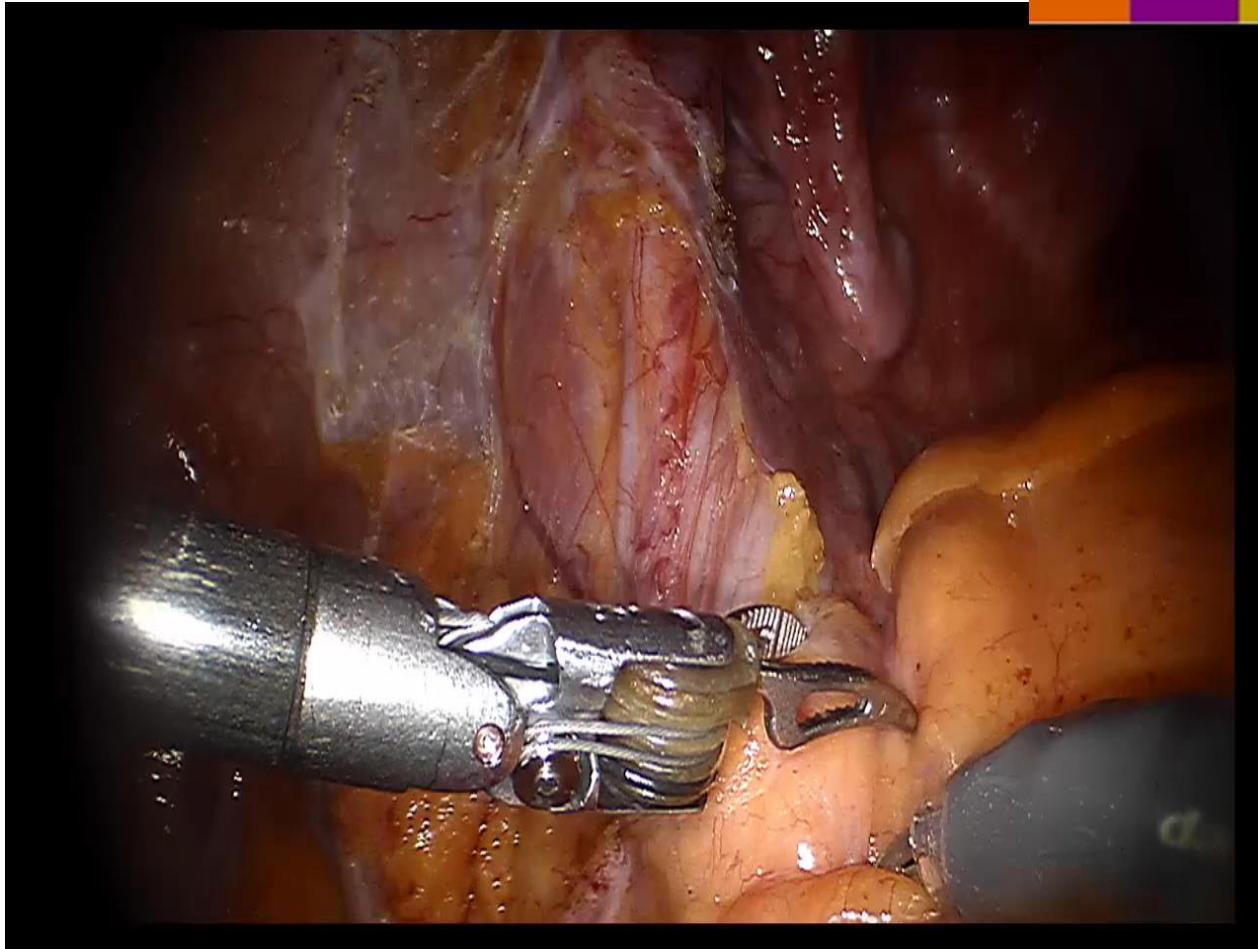
	Blue Dye	Isotope	ICG
Learning curve	10 - 15	10 - 15	<10*
DR, bilat DR	+	++	+++
Cost	25€	373€	45€
Reglementation	No	Complex	No (not allowed)
Risk	++ (<2%)	0	+ (<2/1000)
Easy handling	Yes	Moderate	Yes *
Detection ergonomomy	Yes §	Moderate \$	Yes £
Delay inj-detection	Short (15 min)	Long	Short (<10min)
Obese patients	+	+++	+++
Control	Ex vivo	Imaging, ex vivo	Ex vivo
Leakage	Yes	No	No
Parametrium	Risk FN	Risk FN	Good

- * Possibility of re-injection
- \$ coordination with nuclear medicine
- § Blue on the cervix and surrounding tissue
- £ non visible without IR light

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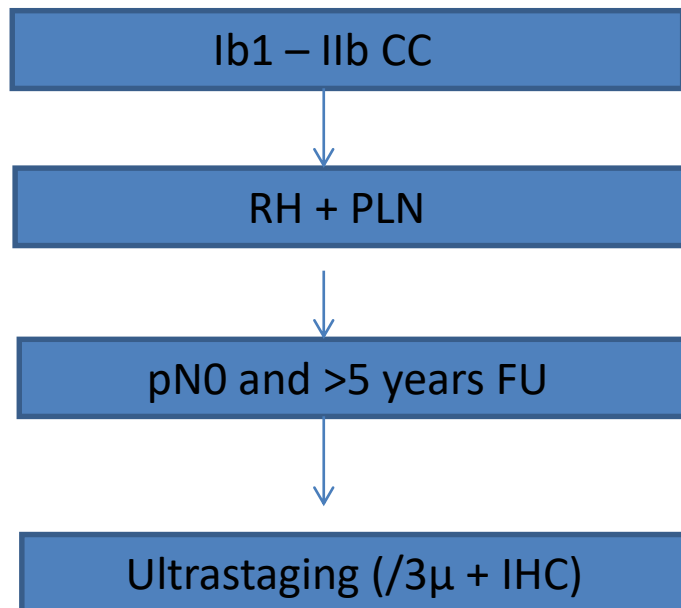
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An Organization of International Cooperative
Groups for Clinical Trials in Gynecologic Cancers



Cervix Cancer Education Symposium, January 2019, South Africa

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- 83 patients included
 - 15 with recurrences (18%)
 - 13 pelvis
 - 1 lung & liver
 - 1 lung
 - 68 without recurrence
- 6 patients (7%) with micromet
- Xvariate for recurrence
 - Micrometastases (OR 11.73)
 - T diameter (≤ 2 cm vs > 2 cm) (OR 4.42)

Colturato L & al 2016

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ESMO - ESTRO - ESP guidelines

- stage Ia1 with LVSI LN can be considered, SLN is adequate
- stage Ia2,
 - LVSI- LN can be considered, SLN is acceptable
 - LVSI+ LN can be considered, SLN is adequate
- stage Ib1 - Ia2
 - pre-operative nodal staging by imaging (MRI > US)
 - if negative, the LN assessment should be performed as the first step. SLN is strongly recommended.
 - intra-operative assessment of LN is recommended (SLN, LN, suspicious LN)
 - negative: PLND
 - positive: +/- PALND



Still indications for lymphadenectomy ?

- Patients with Ib2 or IIb stages ?
- After neo-adjuvant chemotherapy ?
- Patients with pos SLN ?

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Thank you

www.cancerologiegynecologique.eu

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Cervix Cancer Education Symposium, January 2019, South Africa