



# Cancer gynécologique post ASCO 2024

Titre de la réunion

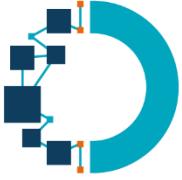
Date de la réunion

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**Lieu de la réunion**

**Pr ELISE DELUCHE**

**Oncologie médicale CHU LIMOGES**

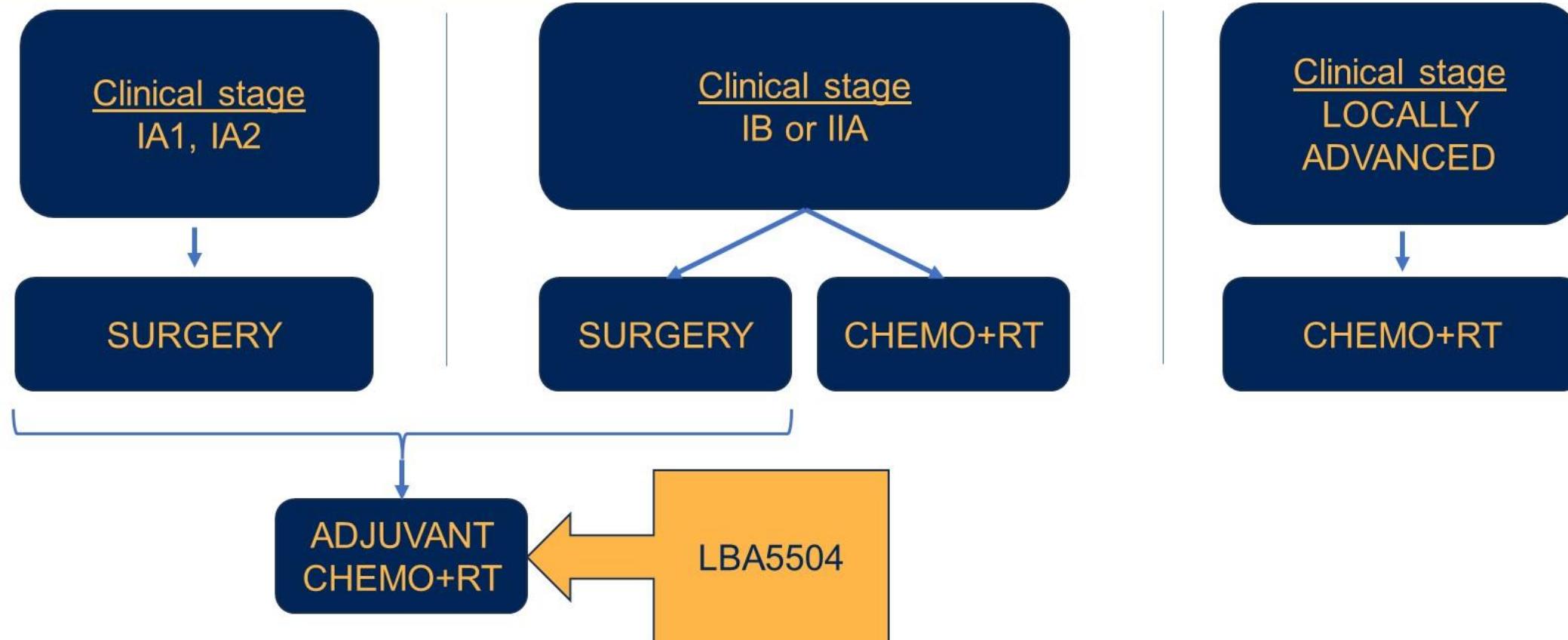


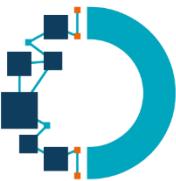
## Liens d'intérêts

- Advisory Boards : Novartis, Pfizer, GSK, Lilly, MSD, AZ
- Congrès : Pfizer, Amgen, Roche, Novartis, GSK
- Honoraires: Astrazeneca-Daiichi, Lilly, Novartis, Pfizer, Fresubin, GSK, MSD, BMS, Menarini

# LBA5504: Adjuvant chemotherapy following concurrent chemoradiation (CRT)

## CURRENT LANDSCAPE OF CERVICAL CANCER





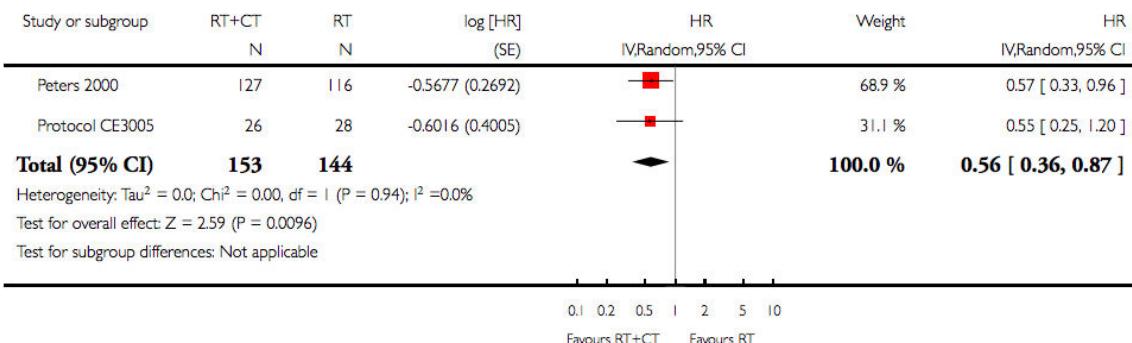
## RT-CT post-opératoire ? Cancer du col initialement localisé → cancer du col avancé sur la pièce définitive

### Analysis I.1. Comparison I Radiotherapy plus chemotherapy versus radiotherapy, Outcome I Death from all causes.

Review: Adjuvant platinum-based chemotherapy for early stage cervical cancer

Comparison: I Radiotherapy plus chemotherapy versus radiotherapy

Outcome: I Death from all causes

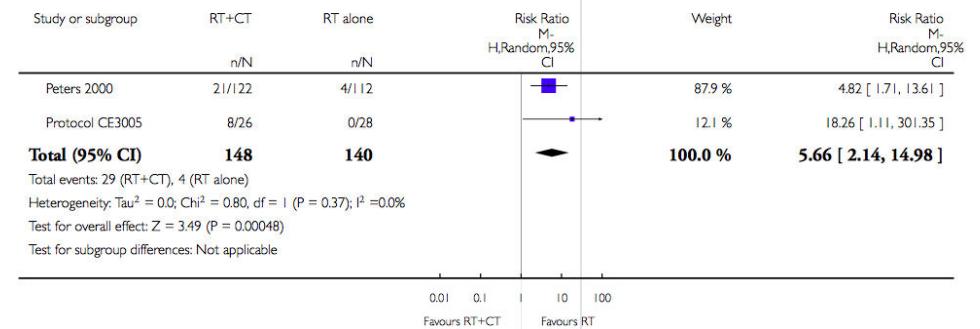


### Analysis I.3. Comparison I Radiotherapy plus chemotherapy versus radiotherapy, Outcome 3 Grade 4 toxicity.

Review: Adjuvant platinum-based chemotherapy for early stage cervical cancer

Comparison: I Radiotherapy plus chemotherapy versus radiotherapy

Outcome: 3 Grade 4 toxicity

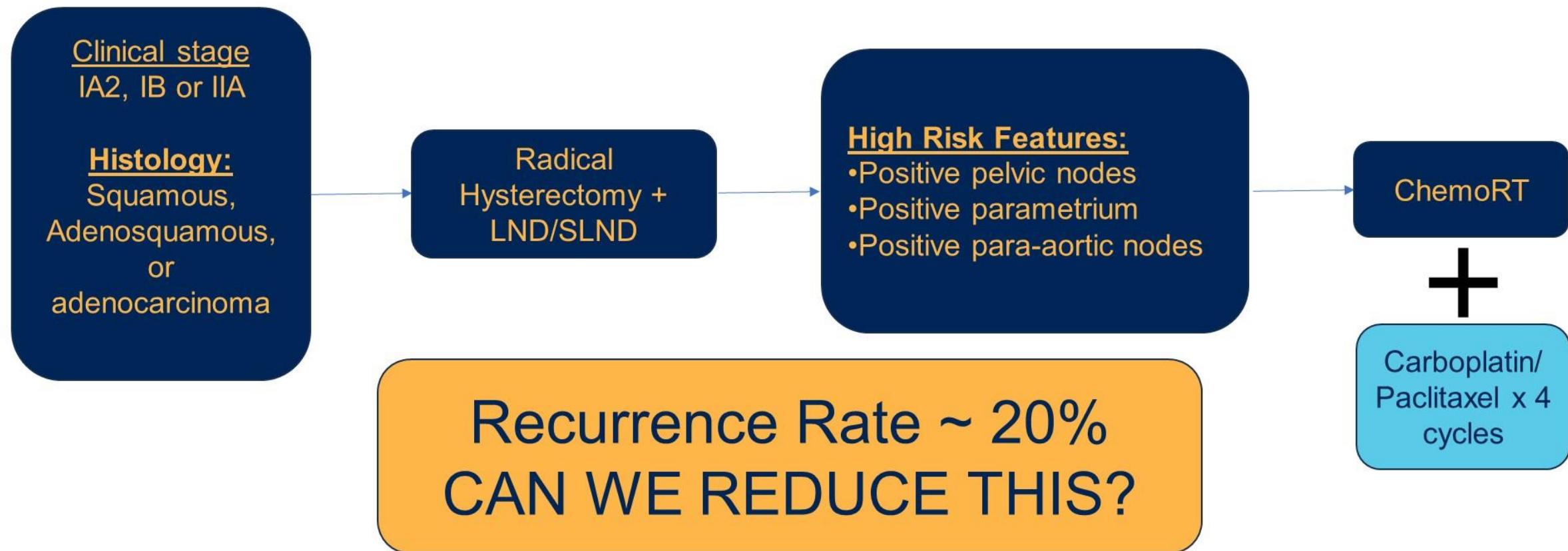


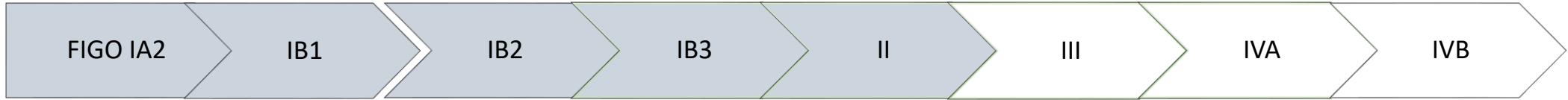
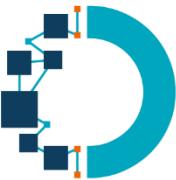
**PETIT BENEFICE MAIS faible effectif, toxicités +++**



# LBA5504: Adjuvant chemotherapy following concurrent chemoradiation (CRT)

What PROBLEM is this research trying to solve?



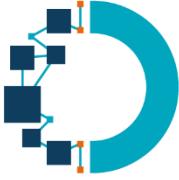


RT-CT post-opératoire ? Cancer du col initialement localisé mais facteurs de risque → cancer du col avancé sur la pièce définitive

## Schema

- Clinical stage IA2, IB, or IIA with high risk factors after surgery
- Radical hysterectomy – positive nodes and/or positive parametrium

S	Intention To Use Brachytherapy 1. No 2. Yes	R	<u>Arm 1</u> Concurrent weekly cisplatin and RT ± brachytherapy
T	RT Modality 1. Standard RT 2. IMRT	A	Versus
I	Radiation Therapy Dose 1. 45 Gy 2. 50.4 Gy	N	<u>Arm 2</u> Concurrent weekly cisplatin and RT ± brachytherapy
F		Z	FOLLOWED BY
Y		E	Carboplatin and paclitaxel

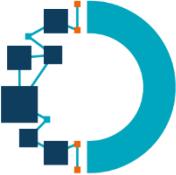


# Endpoints

- Primary endpoint – disease-free survival (DFS)
- Secondary endpoints - OS and AEs (CTCAE v4)
- Methods:
  - OS and DFS estimated by Kaplan-Meier and arms compared using log-rank test
  - Multivariable analyses (MVA) used Cox proportional hazards models

# Results: Enrollment

- Enrollment: 9/16/2009 - 3/2/2022
- 236 patients randomized - 212 eligible
  - 109 Cisplatin-RT (Arm 1)
  - 103 Cisplatin-RT + Chemo (Arm 2)
- Median age 46 years (min-max: 25 -77)
- Median follow-up for all patients – 4.5 years (min-max: 0.02-12.8)

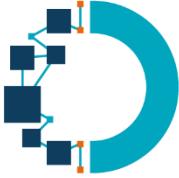


# Results: Patient and Tumor Characteristics

	Cis + RT (n=109)	Cis + RT + chemo (n=103)	Total (n=212)
<b>Race</b>			
White	60 (55%)	49 (48%)	109 (51%)
Asian	42 (39%)	40 (39%)	82 (39%)
Other	7 (6%)	14 (14%)	21 (10%)
<b>Hysterectomy</b>			
Open	64 (59%)	54 (52%)	118 (56%)
Laparoscopic/Robotic	45 (41%)	49 (48%)	94 (44%)
<b>Histological type</b>			
Squamous cell	88 (81%)	74 (72%)	162 (76%)
Adenosquamous	6 (6%)	5 (5%)	11 (5%)
Adenocarcinoma	15 (14%)	24 (23%)	39 (18%)



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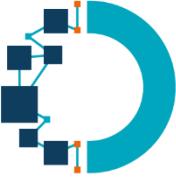
# Results: Patient and Tumor Characteristics

	Cis + RT (n=109)	Cis + RT + chemo (n=103)	Total (n=212)
<b>Stage</b>			
IA2	3 (3%)	6 (6%)	9 (4%)
IB	97 (89%)	88 (85%)	185 (87%)
IIA	9 (8%)	9 (9%)	18 (8%)
<b>Positive pelvic nodes</b>			
No	33 (30%)	23 (22%)	56 (26%)
Yes	76 (70%)	80 (78%)	156 (74%)
<b>Positive para-aortic nodes</b>			
No	54 (50%)	43 (42%)	97 (46%)
Yes	3 (3%)	5 (5%)	8 (4%)
Not dissected	52 (48%)	55 (53%)	107 (50%)



# Results: Radiation Therapy Plan at Study Entry

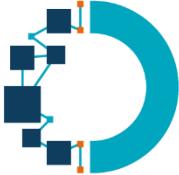
	Cis + RT (n=109)	Cis + RT + chemo (n=103)	Total (n=212)
<b>Intention to use Brachytherapy</b>			
No	61 (56%)	58 (56%)	119 (56%)
Yes	48 (44%)	45 (44%)	93 (44%)
<b>RT modality</b>			
Standard RT	46 (42%)	41 (40%)	87 (41%)
IMRT	63 (58%)	62 (60%)	125 (59%)
<b>RT dose</b>			
45 Gy	35 (32%)	30 (29%)	65 (31%)
50.4 Gy	74 (68%)	73 (71%)	147 (69%)



# Results: Treatment

- 5 patients did not receive RT (4-Arm 1, 1-Arm 2)
- 4 patients did not receive concurrent cisplatin (2 in each arm)
- 27 (26%) Arm 2 patients did not receive adjuvant chemotherapy

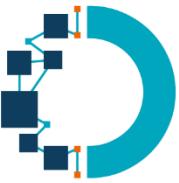
Reasons adjuvant chemo not received	n=27
Disease progression	1 (4%)
Adverse events	6 (22%)
Patient withdrawal/refusal	16 (59%)
Other	3 (11%)
Unknown	1 (4%)



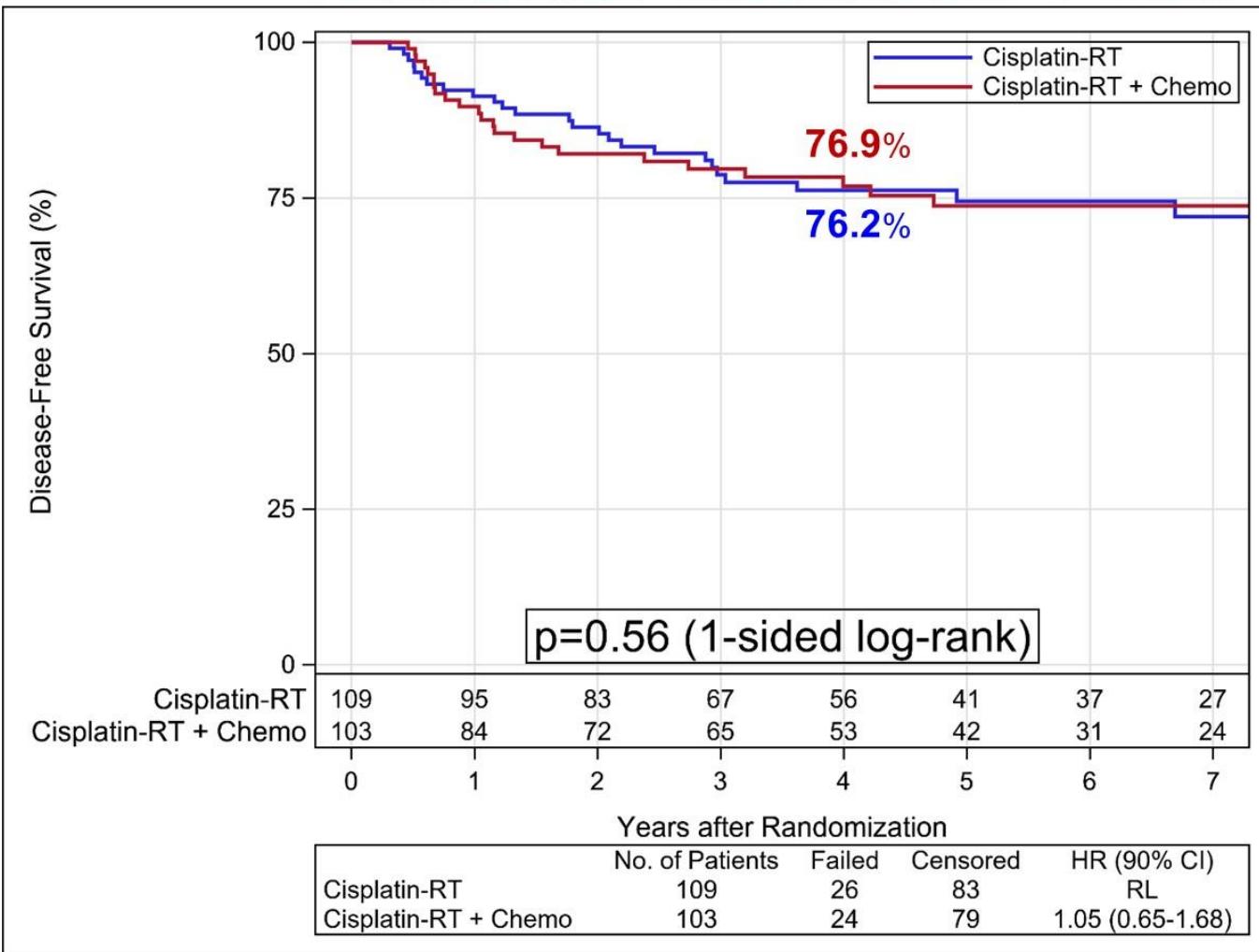
# Results: Treatment-Related Adverse Events

System Organ Class	Cis + RT (n=107)				Cis + RT + chemo (n=101)			
	n and (%) of Patients by Grade				n and (%) of Patients by Grade			
	1	2	3	4	1	2	3	4
<b>Overall Highest Grade</b>	21 (20)	42 (39)	34 (32)	6 (6)	8 (8)	30 (30)	42 (42)	18 (18)
<b>Blood and lymphatic system disorders</b>	19 (18)	21 (20)	8 (7)	0 (0)	20 (20)	30 (30)	10 (10)	0 (0)
<b>Gastrointestinal disorders</b>	57 (53)	31 (29)	7 (7)	1 (1)	42 (42)	35 (35)	12 (12)	0 (0)
<b>Infections and infestations</b>	1 (1)	8 (7)	2 (2)	0 (0)	1 (1)	12 (12)	6 (6)	1 (1)
<b>Investigations</b>	12 (11)	25 (23)	24 (22)	4 (4)	4 (4)	27 (27)	25 (25)	16 (16)
<b>Nervous system disorders</b>	25 (23)	1 (1)	5 (5)	0 (0)	47 (47)	14 (14)	7 (7)	0 (0)
<b>Renal and urinary disorders</b>	21 (20)	8 (7)	4 (4)	0 (0)	31 (31)	14 (14)	1 (1)	1 (1)

Grade ≥ 3 (Cis+RT: 37% vs. Cis+RT+chemo: 59%, p=0.0015)



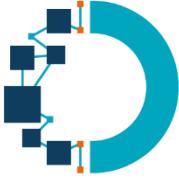
# Results: Disease-Free Survival



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RL: reference level

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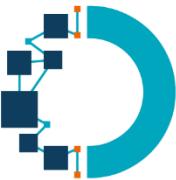


# Results: Disease-Free Survival

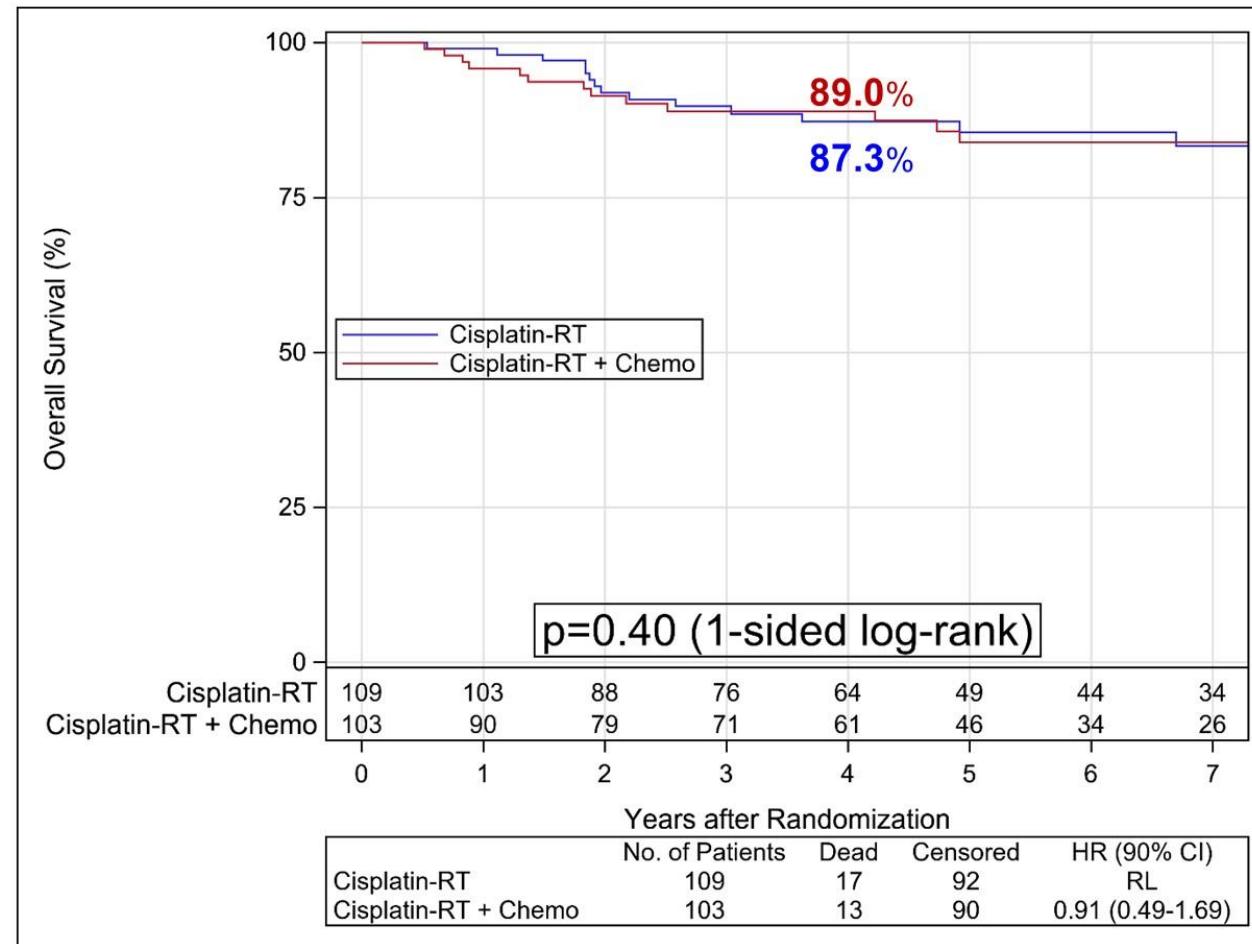
Adjustment Variables	Comparison	Events/ Total	HR (95% CI)	p-value
Treatment arm	Cis + RT (RL) vs. Cis + RT + chemo	26/109 24/103	0.92 (0.52, 1.63)	0.78
Brachytherapy	No (RL) vs. Yes	20/128 30/84	3.32 (1.83, 6.04)	<0.0001
RT dose	< 50 Gy (RL) vs. ≥ 50 Gy	11/68 39/144	3.29 (1.59, 6.81)	0.0014
Histologic type	Adenocarcinoma, NOS (RL) vs. Squamous cell carcinoma/ Adenosquamous carcinoma	14/39 36/173	0.47 (0.25, 0.89)	0.02

## Factors for worse DFS:

- Receiving vaginal brachytherapy
- RT dose > 50 Gy
- Adenocarcinoma histology



# Results: Overall Survival



NRG  
ONCOLOGY

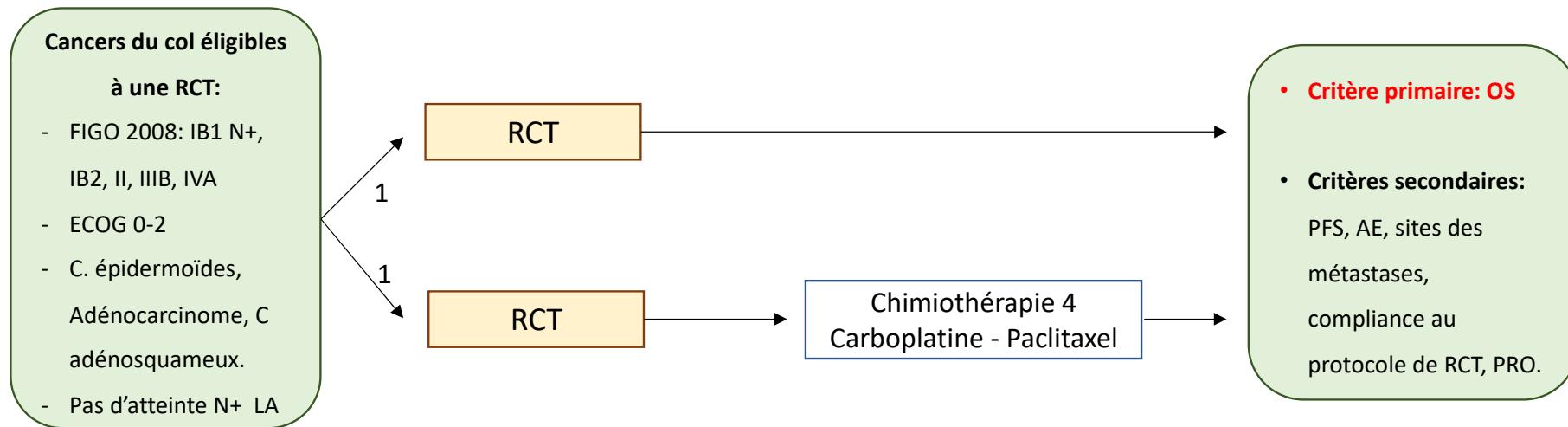
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## Situation : cancer du col localement avancé → RT-CT → CT post-op

Essai de phase III OUTBACK (ANZGOG 0902, RTOG 1174, NRG 0274) Mileshtkin et al. Abstract LBA 3

- Traitement standard des cancers du col localement avancés = radio-chimiothérapie (RCT).
- Rationnel: rechutes et métastases à distances après traitement standard → place de la chimiothérapie adjuvante?<sup>1,2</sup>



<sup>1</sup> Chemoradiotherapy for Cervical Cancer Meta-Analysis Collaboration. JCO. 2008.

<sup>2</sup> Dueñas-González. JCO. 2011.

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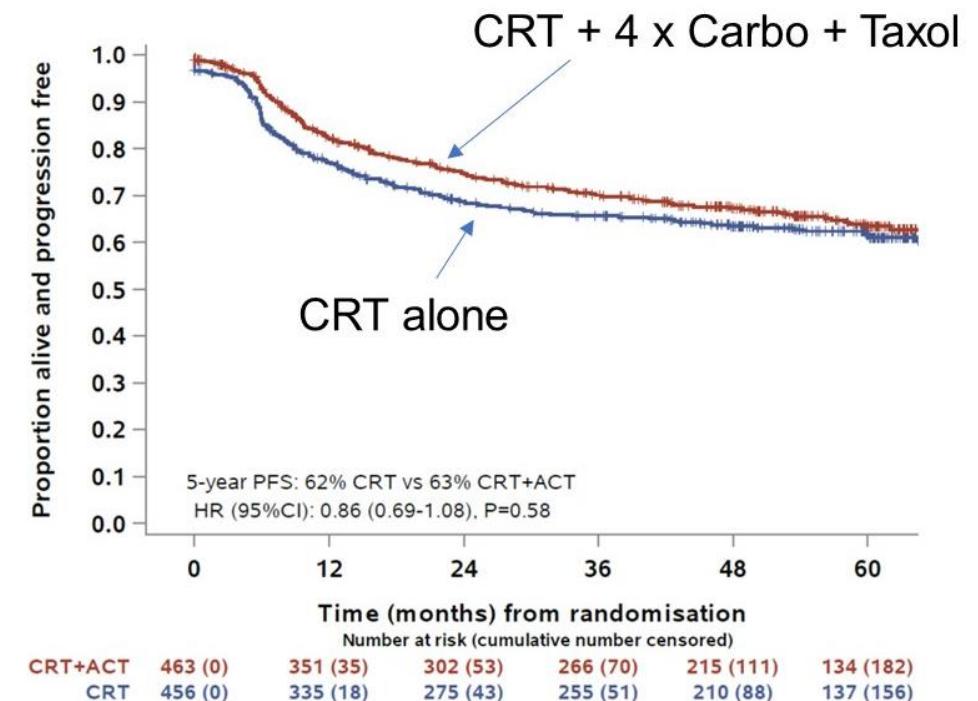
Idem ACTLACC Trial Chokaew Tovanabutra et al. Asian Pac J Cancer Prev. 2021



## Adjuvant chemotherapy following chemoradiotherapy as primary treatment for locally advanced cervical cancer versus chemoradiotherapy alone (OUTBACK): an international, open-label, randomised, phase 3 trial

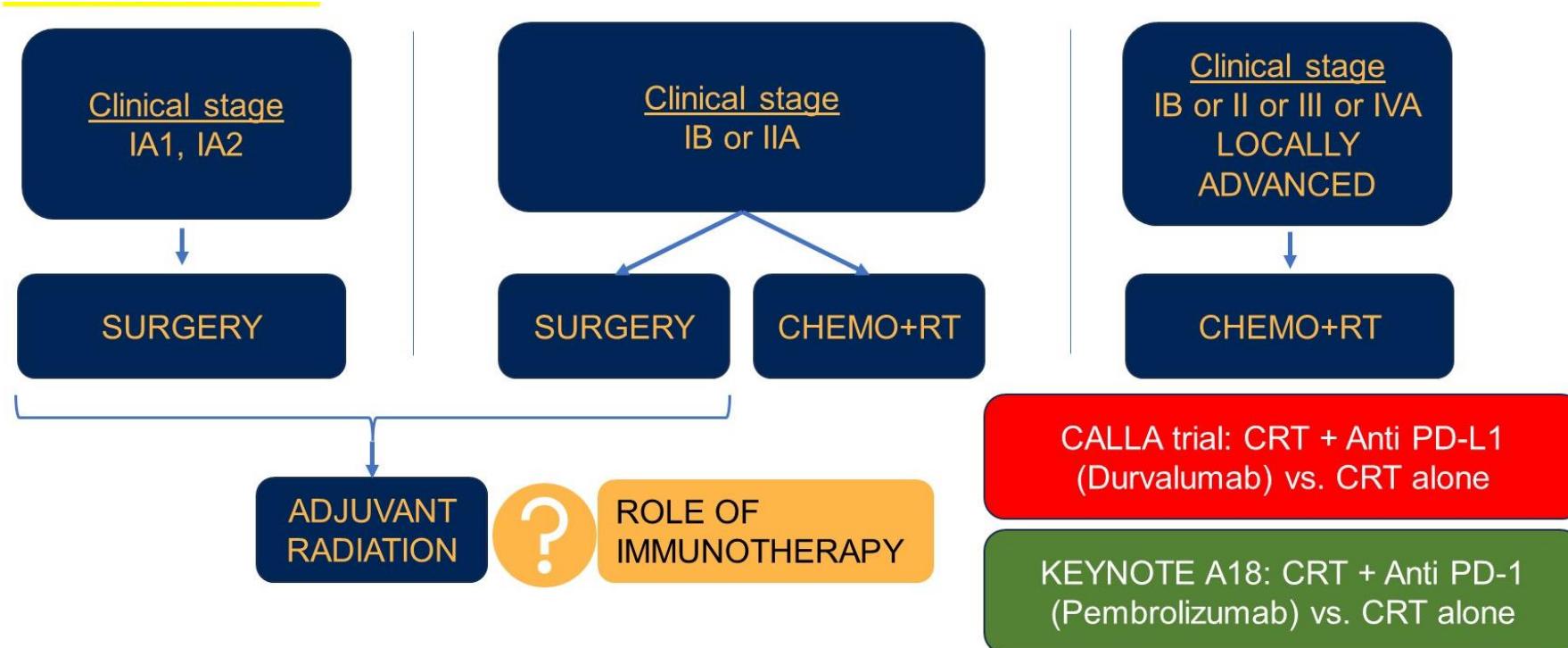
Linda R Mileshkin\*, Kathleen N Moore\*, Elizabeth H Barnes, Val Gebski, Kailash Narayan, Madeleine T King, Nathan Bradshaw, Yeh Chen Lee, Katrina Diamante, Anthony W Fyles, William Small Jr, David K Gaffney, Pearly Khaw, Susan Brooks, J Spencer Thompson, Warner K Hu, Cara A Mathews, Martin Buck, Aneta Suder, Thomas E Lad, Igor J Barani, Christine H Holschneider, Sylvia Van Dyk, Michael Quinn, Danny Rischin, Bradley J Monk†, Martin R Stocklert

- Overall Survival (OS):
  - Adjuvant Chemotherapy Group: 72%
  - Chemoradiotherapy Only Group: 71%
- **Difference: 1% (95% CI –6 to 7); Hazard Ratio: 0.90 (95% CI 0.70 to 1.17); p=0.81.**





# TAKE HOME MESSAGE



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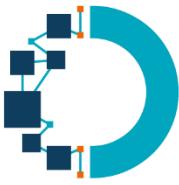
#ASCO24

PRESENTED BY: Shitanshu Uppal, MD MBA

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Pas d'indication de chimiothérapie adjuvante



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# Omission of lymphadenectomy in advanced epithelial ovarian cancer patients treated with primary or interval cytoreductive surgery after neoadjuvant chemotherapy: the CARACO phase III Randomized Trial

Jean-Marc Classe, Campion L, Lecuru F, Vergote I, Jankowski C, Werner R, Pomel C, Houvenaeghel G, Dupré PF, Mathevet P, Villet R, Joly F, Berton D, Debeaupuis E, Frenel JS, Loaec C

2024 ASCO®  
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Jean-Marc Classe, Omission of lymphadenectomy in advanced epithelial ovarian cancer patients: the  
PRESENTED BY: CARACO phase III Randomized Trial  
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# CARACO trial (NCT01218490): Multicenter randomized phase III trial

CARAC

Epithelial ovarian cancer  
Figo stage III-IVA  
No suspicious retroperitoneal lymph node  
Optimal surgery achievable  
(Primary or ICS)  
Residual <1cm

Median laparotomy

**Randomization during surgery**

**Stratification:**  
• Center  
• Primary surgery or Interval surgery

R  
1:1  
N=450

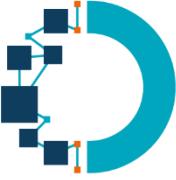
Surgery with RPL

Surgery without RPL

After surgery /SOC  
Last cycles of chemotherapy  
Maintenance treatments

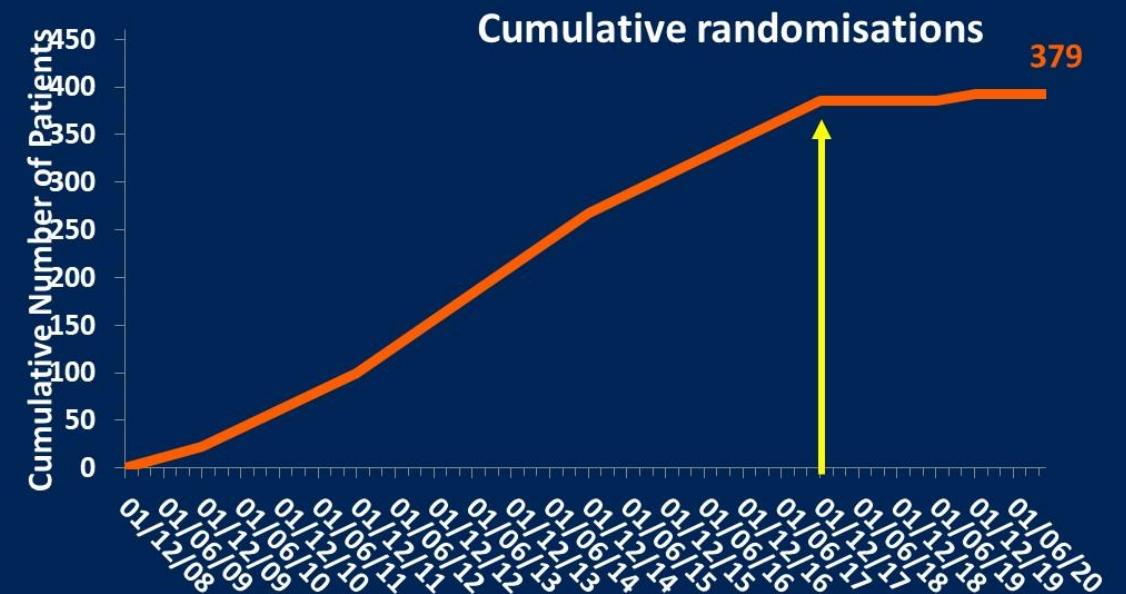
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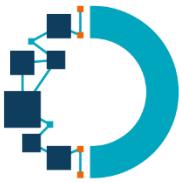
Keys: R: randomization, RPL: Retroperitoneal Lymphadenectomy, ICS: Interval Cytoreductive Surgery, SOC: Standard Of Care



# Less inclusions and less events than required

- After presentation of the LION trial at ASCO meeting 2017, the inclusion rate stagnated, leading to the **premature closing of the trial**
- At the data cutoff: 01/31/2023, **379** patients were randomized (/ 450) from 14 Centers in France, 3 in Germany, 1 in Belgium and 1 in Canada
  - 314 events were observed (/335) leading to a power analysis of 78% with a median follow-up of 9 years





# CARACO trial: Inclusion / exclusion criteria

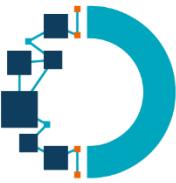
## Inclusion criteria

- > 18 years old
- Epithelial ovarian cancer
- Good performance status (Karnofsky >80) or ASA<2
- Thoraco Abdomino Pelvic CT or MRI: no node >2cm, no nodes palpated during surgery
- FIGO stage III-IVA (pleural effusion)
- Feasible optimal Primary surgery or if not feasible interval surgery after NAC (residual tumour <1cm)

## Exclusion criteria

- Non epithelial carcinoma
- Borderline carcinoma
- FIGO stage I-II or IVB
- Previous retroperitoneal lymph node resection
- Thoraco Abdomino Pelvic CT or MRI: node >2cm before any treatment. A patient with lymph node >2cm before treatment and downstaged after NAC remains contra indicated
- A residual tumour  $\geq 1\text{cm}$
- Complete surgery still not feasible after 3/4 cycles of NAC

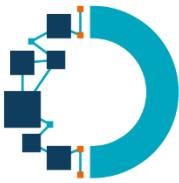
Keys: ASA: American Society of Anesthesiologist, CT: Computed Tomography, MRI: Magnetic Resonance Imaging,  
NAC: neoadjuvant chemotherapy



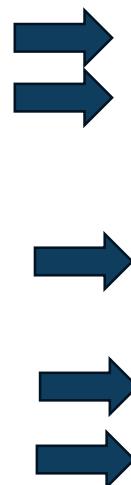
# CARACO trial: Baseline characteristics

Characteristics	No RPL (n=193)	RPL (n=186)
Median age (IQR), years	65 (57-71)	64 (56-70)
Serous or endometrioid carcinoma, n (%)	166 (86.0)	163 (87.6)
Other pathological subtype	27 (14.0)	20 (10.8)
MD	0	3 (1.6)
CA 125 before treatment (median - IQR )	498 (139-1469)	466 (105-1245)
PCI (median - IQR) (MD)	8 (4-14) (20)	9 (3-14) (23)

Keys: RPL: Retroperitoneal Lymphadenectomy MD: Missing Data, PCI: Peritoneal Cancer Index, IQR: Inter Quartile Range

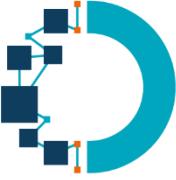


## CARACO trial: characteristics of surgery, and bevacizumab



Characteristics	No RPL (n=193)	RPL (n=186)
Surgery to not any residual, n (%)	161 (85.6)	158 (88.3)
Resected lymph nodes total (median IQR)		28 (19-36)
Para aortic LN (median IQR)		12 (7-18)
Pelvic LN (median IQR)		13 (9-19)
Patients with $\geq 1$ involved LN		81 (43%)
Median duration of surgery (minutes)	240 (180-290)	300 (240-360)
Maintenance with Bevacizumab after surgery	46 (23.8)	44 (23.7)
Surgical strategy	PS: 50/ ICS: 143	PS: 40/ICS:146

Keys:RPL: Retroperitoneal Lymphadenectomy, IQR: Inter Quartile Range, LN: Lymph Node, PS: Primary Surgery, ICS: Interval Cyrtoreductive Surgery



## CARACO: Severe morbidity and mortality (within 30 days after surgery)\*

No. of patients (%)	No RPL (n=193)	RPL (n=186)	p
Transfusion or blood loss	57 (29.7)	72 (39.3) ★	P=0.049
Re intervention	6 (3.1)	15 (8.3) ★	P=0.031
Urinary injury	0 (0.0)	7 (3.8) ★	P=0.006
Digestive fistula	2 (1.1)	4 (2.2)	NS
Phlebitis – Pulmonary embolism	7 (3.7)	3 (1.6)	NS
Mortality	1 (0.5)	2 (1.1)	NS

Key: RPL: Retroperitoneal Lymphadenectomy

\* CTC-NCI version 3.0

Jean-Marc Classe, Omission of lymphadenectomy in advanced epithelial ovarian cancer patients:

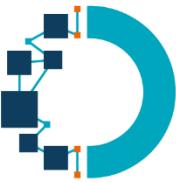
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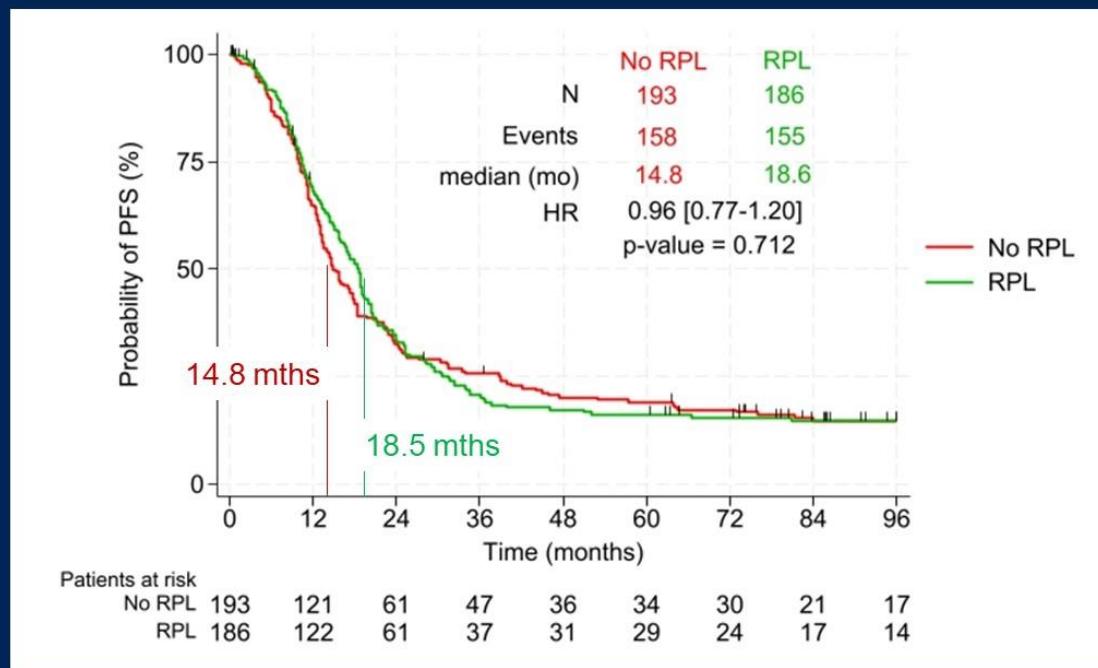
PRESENTED BY: the CARACO phase III Randomized Trial

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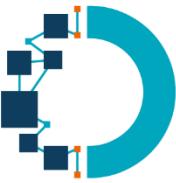
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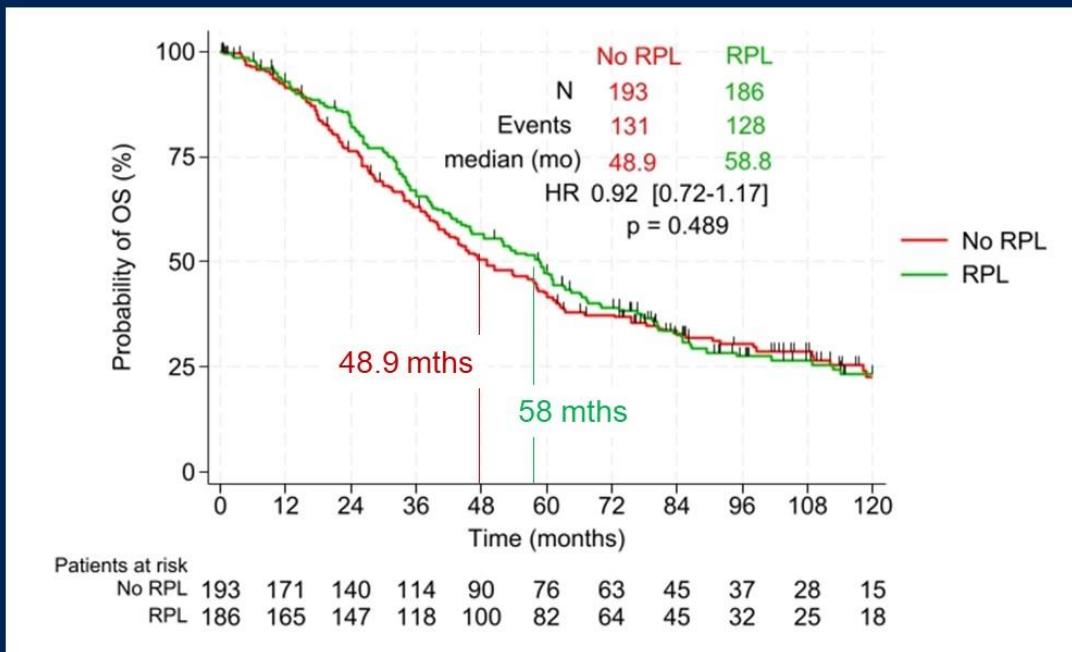
## CARACO trial: Primary endpoint (PFS, ITT population)



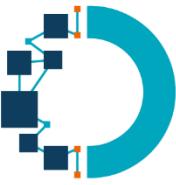
Key: RPL: Retroperitoneal Lymphadenectomy



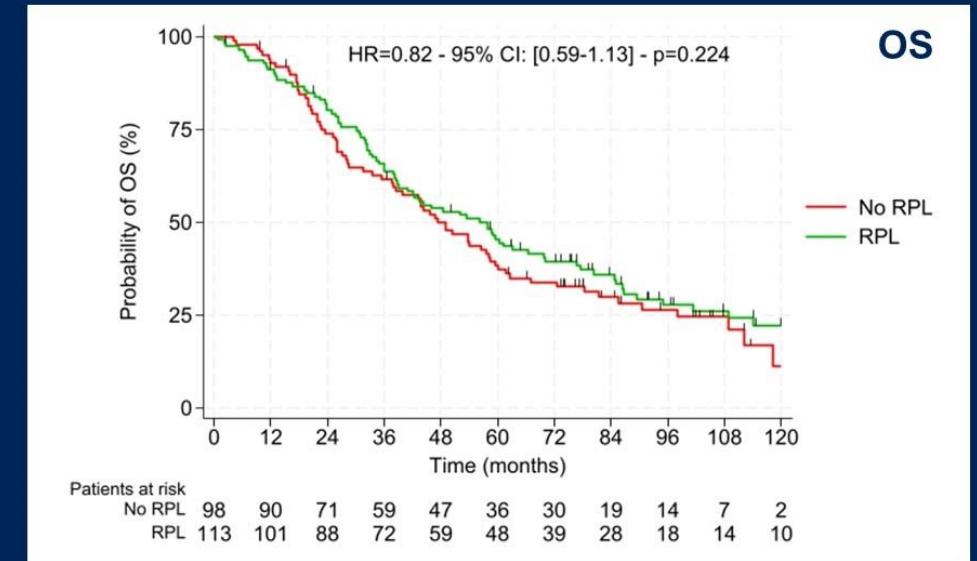
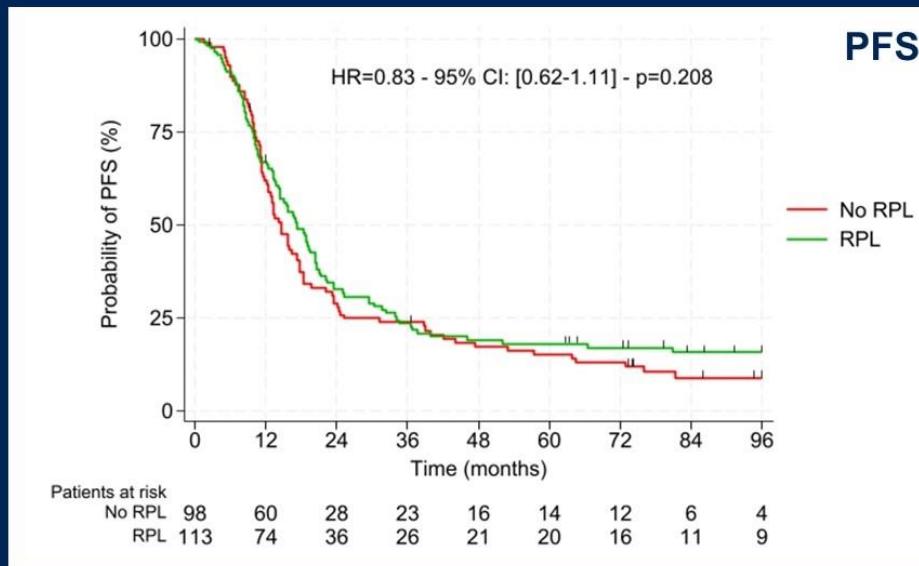
## CARACO trial: OS (secondary endpoint, ITT population)



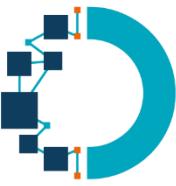
Key: RPL: Retroperitoneal Lymphadenectomy



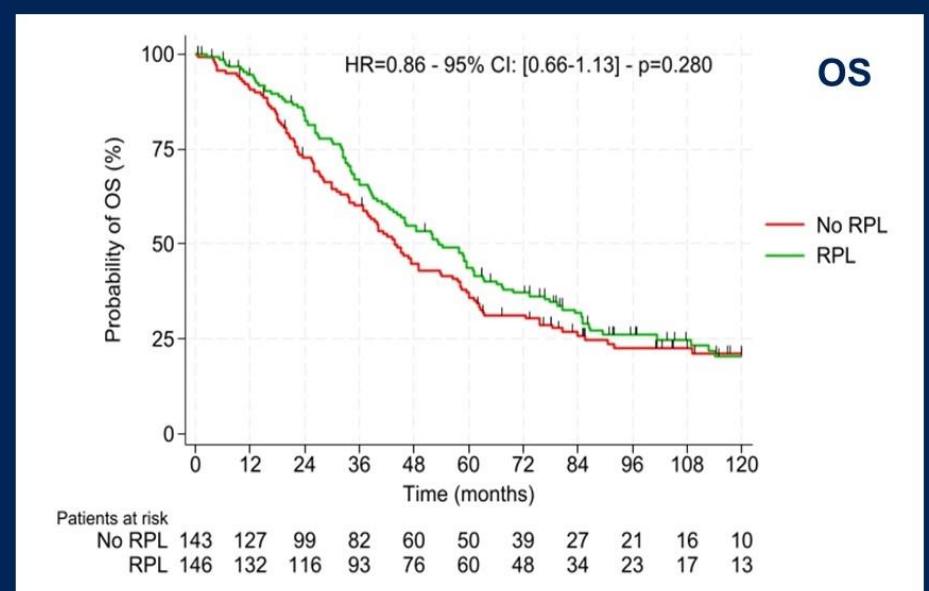
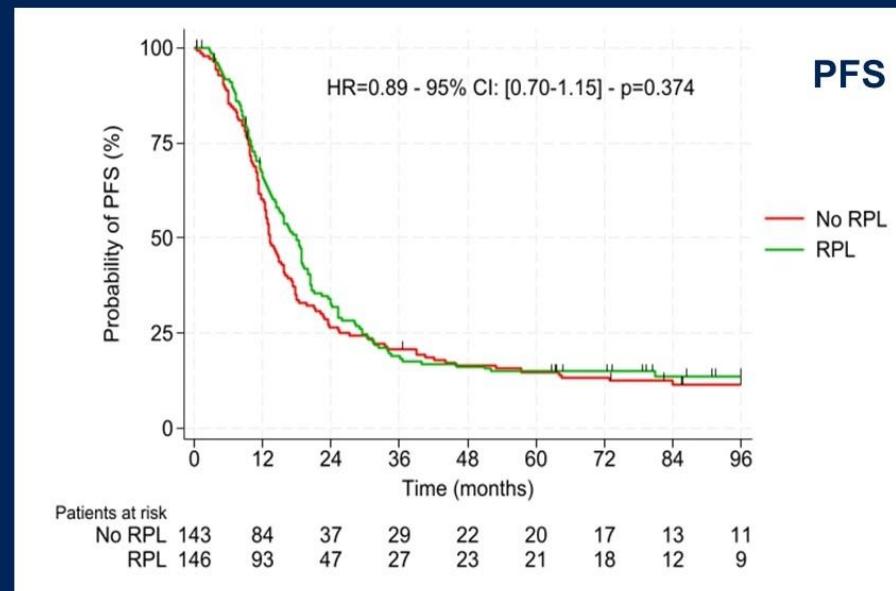
## Subgroup analysis: High grade serous or endometrioid



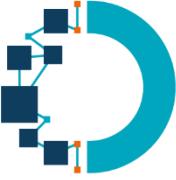
Key: RPL: Retroperitoneal Lymphadenectomy



## Subgroup analysis: Interval surgery



Key: RPL: Retroperitoneal Lymphadenectomy



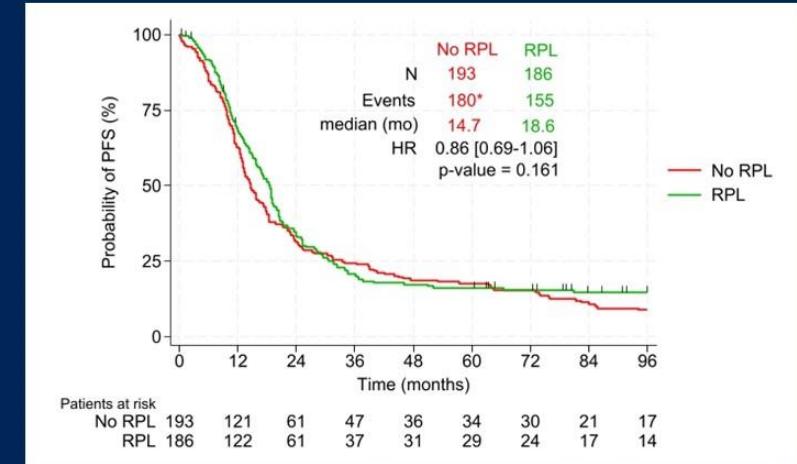
## CARACO trial: Limits of the study

- A lower number of events than expected  
**(22 events /335 – 6% - missing)**

Considering « the worst case scenario\* »:

- 22 missing events are added to the worst group,  
in order to virtually increase the difference with  
the best group.

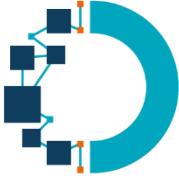
No difference in PFS (p=0.161)



Key: RPL: Retroperitoneal Lymphadenectomy

- No information about the mutational status collected
- Two different populations: primary on interval surgery: it reflects real life of surgical management of these patients, with no proven survival difference

\*Gamble C, et al, J Clin Epidemiol. 1995.



## TAKE HOME MESSAGE

- En cas de chirurgie d'intervalle et en l'absence de GG cliniquement visualisable : pas d'indication à faire un curage ganglionnaire
- On peut laisser les GG sans que cela impacte sur la survie sauf si visuellement détectables

