



High risk and Metastatic/Recurrent Endometrial Cancer

Hyun-Woong Cho
Seoul Asan Medical Center

DECLARATION OF INTERESTS

I have the following financial relationships with ACCME defined ineligible companies to report over the past 24 months:

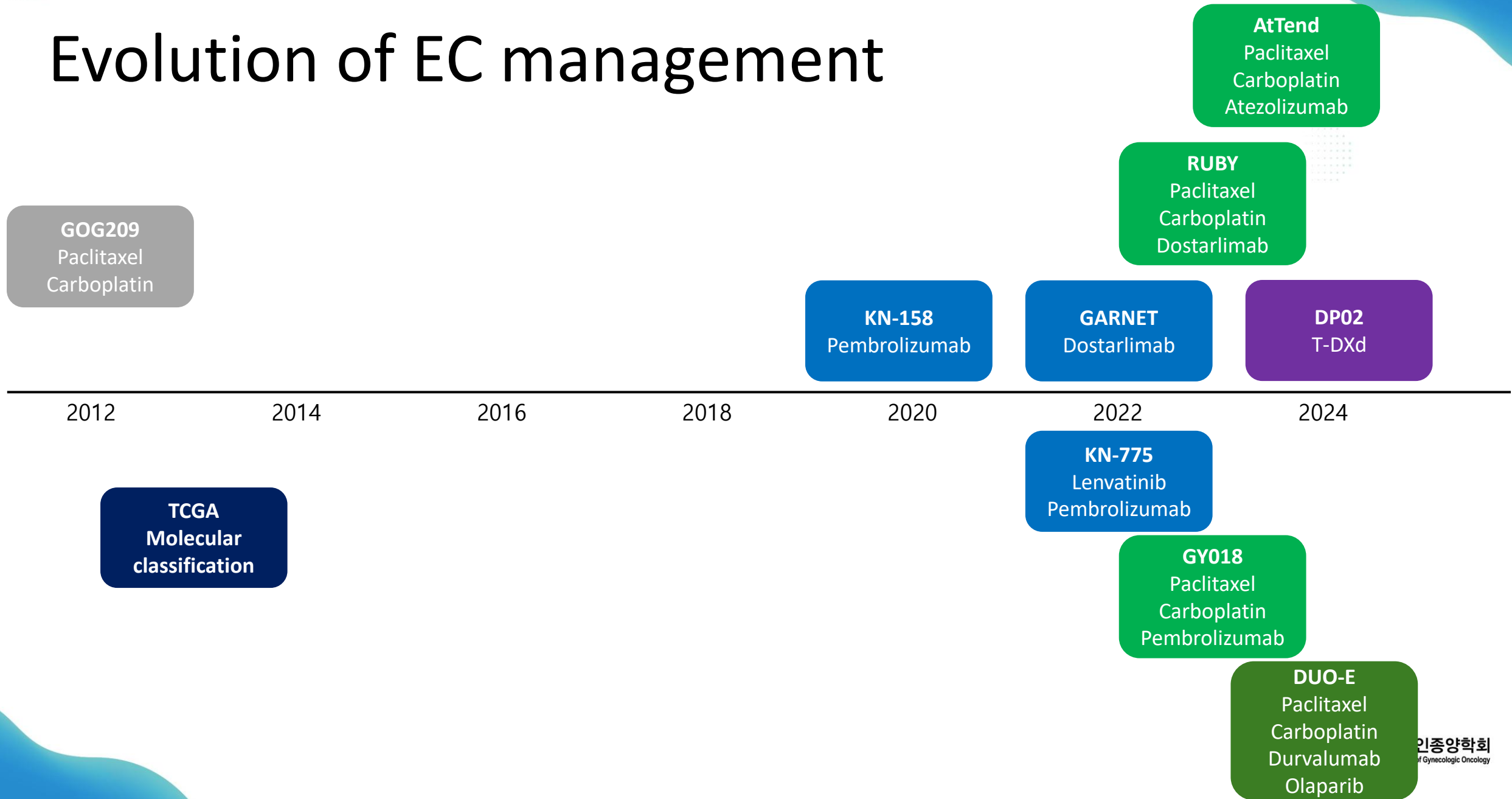
Honoraria/expenses for consulting/advisory boards from GSK

Funded research supported by Boryung, Hanmi, and Chong Kun Dang (Ongoing)

Contents

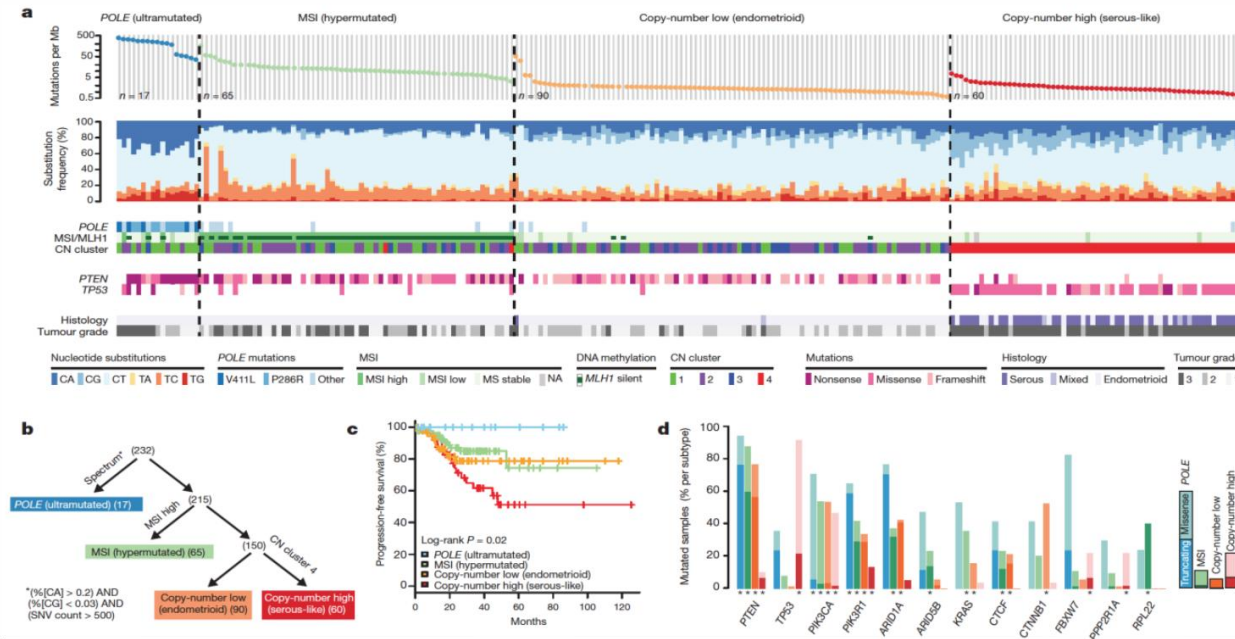
- Management landscape of endometrial cancer (EC)
- Adjuvant treatment in high-risk endometrial cancer
- Management of Recurrent/Metastatic disease

Evolution of EC management



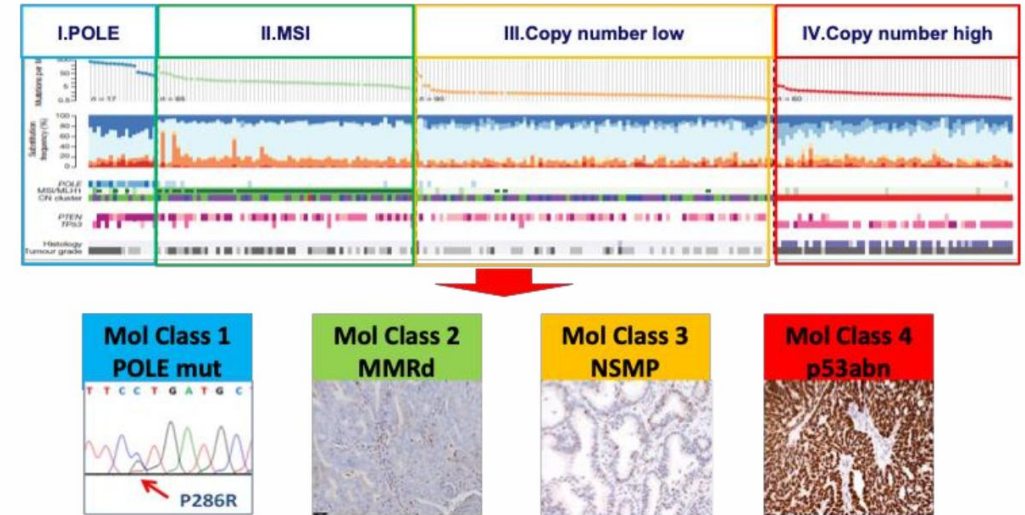
TCGA initiative: Emerging prospects in EC

The Cancer Genome Atlas: Endometrial Carcinoma



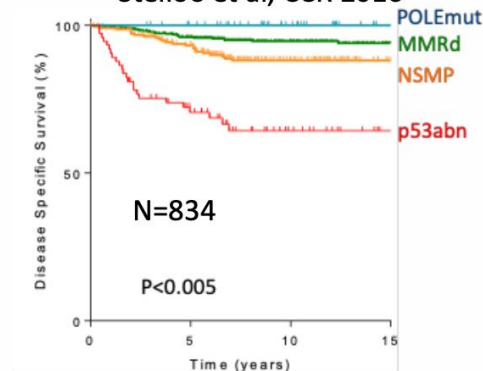
TCGA (Kandoth et al, Nature 2013)

Surrogate markers



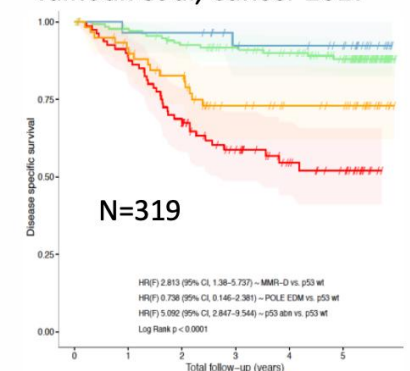
High-intermediate risk

Stelloo et al, CCR 2016



Unselected

Talhok et al, Cancer 2017



ESGO-ESTRO-ESP & ESMO guidelines

Risk Group	Molecular Classification Unknown	Molecular Classification Known ^{a,*}
Low	Stage IA endometrioid + low-grade** + LVSI negative or focal	- Stage I-II POLEmut endometrial carcinoma, no residual disease - Stage IA MMRd/NSMP endometrioid carcinoma + low-grade** + LVSI negative or focal
Intermediate	- Stage IB endometrioid + low-grade** + LVSI negative or focal - Stage IA endometrioid + high-grade** + LVSI negative or focal - Stage IA non-endometrioid (serous, clear cell, undifferentiated carcinoma, carcinosarcoma, mixed) without myometrial invasion	- Stage IB MMRd/NSMP endometrioid carcinoma + low-grade** + LVSI negative or focal - Stage IA MMRd/NSMP endometrioid carcinoma + high-grade** + LVSI negative or focal - Stage IA p53abn and/or non-endometrioid (serous, clear cell, undifferentiated carcinoma, carcinosarcoma, mixed) without myometrial invasion
High-intermediate	- Stage I endometrioid + substantial LVSI, regardless of grade and depth of invasion - Stage IB endometrioid high-grade**, regardless of LVSI status - Stage II	- Stage I MMRd/NSMP endometrioid carcinoma + substantial LVSI, regardless of grade and depth of invasion - Stage IB MMRd/NSMP endometrioid carcinoma high-grade**, regardless of LVSI status - Stage II MMRd/NSMP endometrioid carcinoma
High	- Stage III-IVA with no residual disease - Stage I-IVA non-endometrioid (serous, clear cell, undifferentiated carcinoma, carcinosarcoma, mixed) with myometrial invasion, and with no residual disease	- Stage III-IVA MMRd/NSMP endometrioid carcinoma with no residual disease - Stage I-IVA p53abn endometrial carcinoma with myometrial invasion, with no residual disease - Stage I-IVA NSMP/MMRd serous, undifferentiated carcinoma, carcinosarcoma with myometrial invasion, with no residual disease
Advanced Metastatic	- Stage III-IVA with residual disease - Stage IVB	- Stage III-IVA with residual disease of any molecular type - Stage IVB of any molecular type

^aFor stage III-IVA **POLEmut** endometrial carcinoma, and stage I-IVA **MMRd** or **NSMP** clear cell carcinoma with myometrial invasion, insufficient data are available to allocate these patients to a prognostic risk-group in the molecular classification. Prospective registries are recommended

Table 2. EC risk groups	
Risk group	Description ^a
Low risk	Stage IA (G1-G2) with endometrioid type (dMMR ^b and NSMP) and no or focal LVSI Stage I/II POLEmut cancer; for stage III POLEmut cancers ^c
Intermediate risk	Stage IA G3 with endometrioid type (dMMR and NSMP) and no or focal LVSI Stage IA non-endometrioid type (serous, clear-cell, undifferentiated carcinoma, carcinosarcoma, mixed) and/or p53-abn cancers without myometrial invasion and no or focal LVSI Stage IB (G1-G2) with endometrioid type (dMMR and NSMP) and no or focal LVSI Stage II G1 endometrioid type (dMMR and NSMP) and no or focal LVSI
High-intermediate risk	Stage I endometrioid type (dMMR and NSMP) any grade and any depth of invasion with substantial LVSI Stage IB G3 with endometrioid type (dMMR and NSMP) regardless of LVSI Stage II G1 endometrioid type (dMMR and NSMP) with substantial LVSI Stage II G2-G3 endometrioid type (dMMR and NSMP)
High risk	All stages and all histologies with p53-abn and myometrial invasion All stages with serous or undifferentiated carcinoma including carcinosarcoma with myometrial invasion All stage III and IVA with no residual tumour, regardless of histology and regardless of molecular subtype ^b

- First integration of histopathological and molecular features in risk groups:
 - POLE good
 - MMRd & NSMP intermediate
 - P53 poor

FIGO 2009 versus FIGO 2023 staging systems for EC

FIGO 2009

anatomic tumor spread



FIGO 2023

tumor type, tumor grade, LVSI, and molecular alterations

FIGO 2009 ² (AJCC 8th ed)	FIGO 2023
Stage I Defined as tumor confined to the uterine corpus.	Defined now by a combination of the following features: histological type ^a , myometrial invasion (presence and extent into inner vs outer half), absent or focal LVSI ^b .
Subdivided as IA (myometrial invasion absent or <50% of the uterine wall) and IB (myometrial invasion ≥50%).	Categorization as IA vs IB as defined in FIGO 2009 ² now only applies to non-aggressive histological types with no or focal LVSI.
Distinction between absent and <50% myometrial invasion is not necessary.	For non-aggressive histological types with no or focal LVSI, reintroduces distinction between cancer confined to the endometrium (now IA1) vs <50% myometrial invasion (now IA2) vs ≥50% myometrial invasion (IB).
	For aggressive histological types, introduces stage IC (aggressive histological types without myometrial invasion), and considers any myometrial invasion as stage IIC.
	Introduces ovarian involvement as allowed if the following criteria are present: low grade endometrioid type; absent or superficial myometrial invasion (<50%); absent or focal LVSI; absence of additional metastases; the ovarian tumor is unilateral, limited to the ovary, without capsule invasion/rupture.
Stage II Defined as tumor confined to the uterus with invasion into the cervical stromal tissue.	Defined now by a combination of the following features: cervical stromal involvement, substantial LVSI ^b , and aggressive histological tumor type with myometrial invasion.
	Stage II is now subdivided into IIA (cervical stromal invasion by non-aggressive histological type), IIB (substantial LVSI by non-aggressive histological type), and IIC (aggressive histological type with any myometrial invasion).
*In FIGO 2023 stage I and II, <i>POLE</i> -mutant tumors are staged as IA _m POLEmut and p53-abnormal tumors as IIC _m p53abn regardless of the anatomic spread, the degree of LVSI or histological type. No specific molecular profile (NSMP) and MMRd molecular subtypes do not affect tumor staging.	
^a Histological types: ▶ Non-aggressive histological types: FIGO grade 1 and 2 endometrioid. ▶ Aggressive histological types: FIGO grade 3 endometrioid, serous, clear cell, undifferentiated, dedifferentiated, mesonephric-like, gastrointestinal-type mucinous, carcinosarcoma.	
^b Lymphovascular space invasion (LVSI): ▶ Substantial: ≥5 vessels involved. ▶ Focal: <5 vessels involved.	

1. Stage I & II: Non-anatomical parameters

- histological type and grade, LVSI, and molecular group

Stage III Defined as spread outside of the uterus other than bladder/intestinal lining, lymph nodes, and distant sites.	Defined as local and/or regional tumor spread.
Groups tubo-ovarian and serosal tumor involvement as stage IIIA.	Stage IIIA is now subdivided into IIIA1 (spread to ovary or fallopian tube) and IIIA2 (involvement of uterine subserosa or spread through uterine serosa). Introduces the concept of 'uterine subserosa'.
Defines vaginal and parametrial tumor involvement as stage IIIB.	Stage IIIB now includes pelvic peritoneum. It is subdivided into IIIB1 (metastasis or direct spread to vagina and/or parametria) and IIIB2 (metastasis to pelvic peritoneum).
Groups nodal micro- and macrometastasis as stage IIIC1 (pelvic) and IIIC2 (para-aortic).	Stage IIIC1 (pelvic nodal spread) is now subdivided into IIIC1i (micrometastasis) and IIIC1ii (macrometastasis). Stage IIIC2 (para-aortic nodal spread) is now subdivided into IIIC2i (micrometastasis) and IIIC2ii (macrometastasis).
Stage IV Groups abdominal peritoneal spread along with lungs, liver, brain, bone, and inguinal or extrapelvic lymph nodes above renal vessels (stage IV B).	Separates abdominal peritoneal spread (now IVB) from lungs, liver, brain, bone, and inguinal or extrapelvic lymph nodes above renal vessels (stage IVC).

2. Stage III & IV: Subdivision of according to

- Location (vaginal vs parametrial)
- size (nodal micrometa vs macrometa)

3. Uterus and ovarian involvement

- IA3: "synchronous" malignancy
- IIIA1: spread to ovary or tube

ESGO-ESTRO-ESP guideline 2025

			Low	Intermediate	High-Intermediate	High	Uncertain
2023 FIGO staging [†]			Molecular classification*				
			POLEmut	MMRd	NSMP low-grade+ERpos	NSMP high-grade/ERneg**	p53abn
I	Confined to the uterine corpus						
IA	IA1	Low-grade endometrioid, limited to polyp/endometrium (no myoinvasion)	IAm POLEmut				
	IA2	Low-grade endometrioid, myoinvasion <50%, no/focal LVSI	IAm POLEmut			**	IICm p53abn
	IA3	Low-grade endometrioid carcinoma of the endometrium & ovary#	IAm POLEmut			**	IICm p53abn
IB		Low-grade endometrioid, myoinvasion ≥50%, no/focal LVSI	IAm POLEmut			**	IICm p53abn
IC		High-grade histologies [^] , limited to polyp/endometrium	IAm POLEmut		n.a.		
II	Confined to the uterus						
IIA		Low-grade endometrioid, invasion of the cervical stroma	IAm POLEmut			**	IICm p53abn
IIB		Low-grade endometrioid, substantial LVSI***	IAm POLEmut			**	IICm p53abn
IIC		High-grade histologies [^] , myoinvasion	IAm POLEmut	Myoinvasion <50%, no/focal LVSI	n.a.		IICm p53abn
			IAm POLEmut	Myoinvasion ≥50%, no/focal LVSI			
			IAm POLEmut	Cervical stromal invasion, no/focal LVSI			
			IAm POLEmut	Substantial LVSI**			

ESGO-ESTRO-ESP guideline 2025

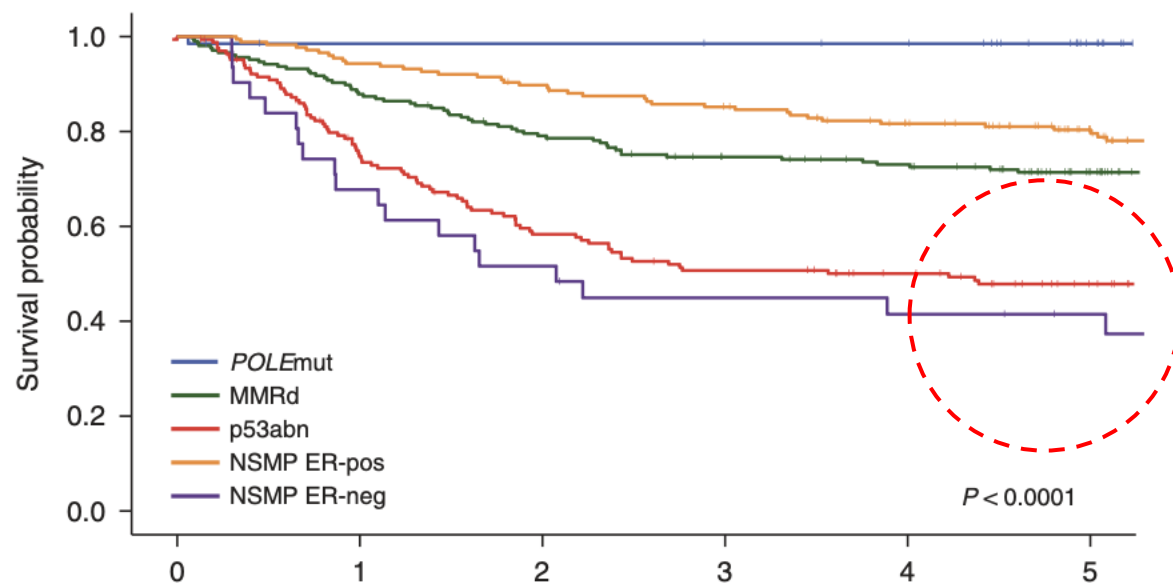
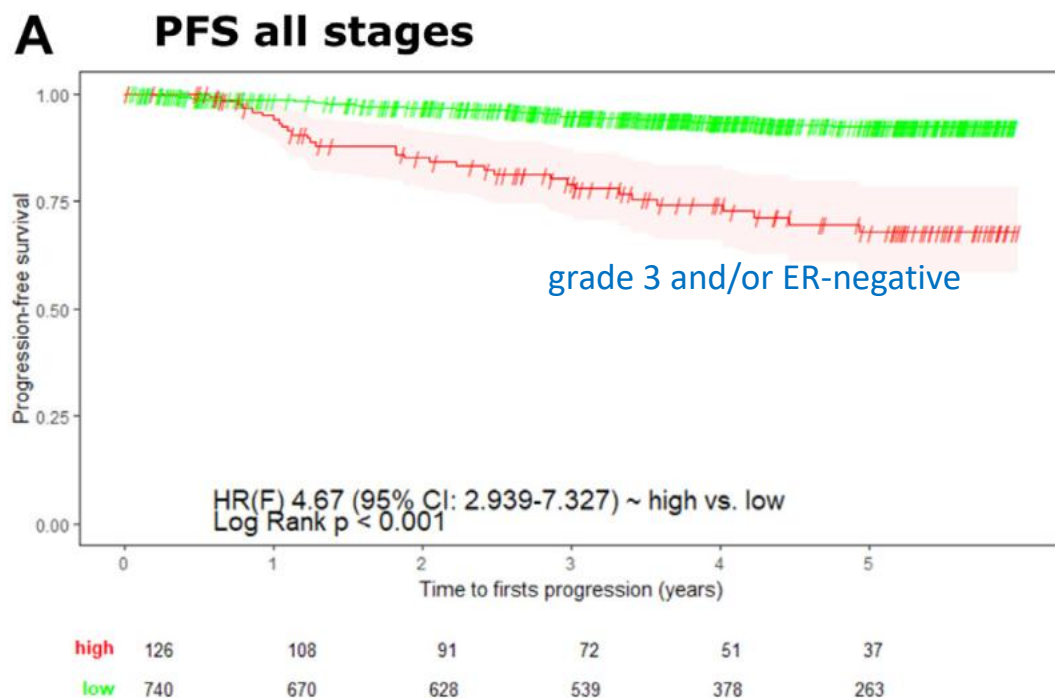
Low	Intermediate	High-Intermediate	High	Uncertain
-----	--------------	-------------------	------	-----------

2023 FIGO staging [†]			Molecular classification*				
			<i>POLE</i> mut	MMRd	NSMP low-grade+ERpos	NSMP high-grade/ERneg**	p53abn
III	Local and/or regional spread						
IIIA	IIIA1	Spread to ovary or fallopian tube (except when meeting stage IA3 criteria)					
	IIIA2	Involvement of uterine subserosa or spread through the uterine serosa					
IIIB	IIIB1	Metastasis or direct spread to the vagina and/or the parametria					
	IIIB2	Metastasis to the pelvic peritoneum					
IIIC	IIIC1	Pelvic lymph node metastasis					
	IIIC1i	Micrometastasis					
	IIIC1ii	Macrometastasis					
	IIIC2	Para-aortic lymph node metastasis (up to renal vessels)					
	IIIC2i	Micrometastasis					
	IIIC2ii	Macrometastasis					
IV	Locally advanced and/or metastatic disease						
IVA		Invasion of the mucosa and/or the intestinal mucosa					
	Metastatic disease or residual disease after surgery						
III/IVA		With residual disease					
IVB		Peritoneal metastasis beyond the pelvis					
IVC		Distant metastasis					

ESGO-ESTRO-ESP guideline 2025: summary

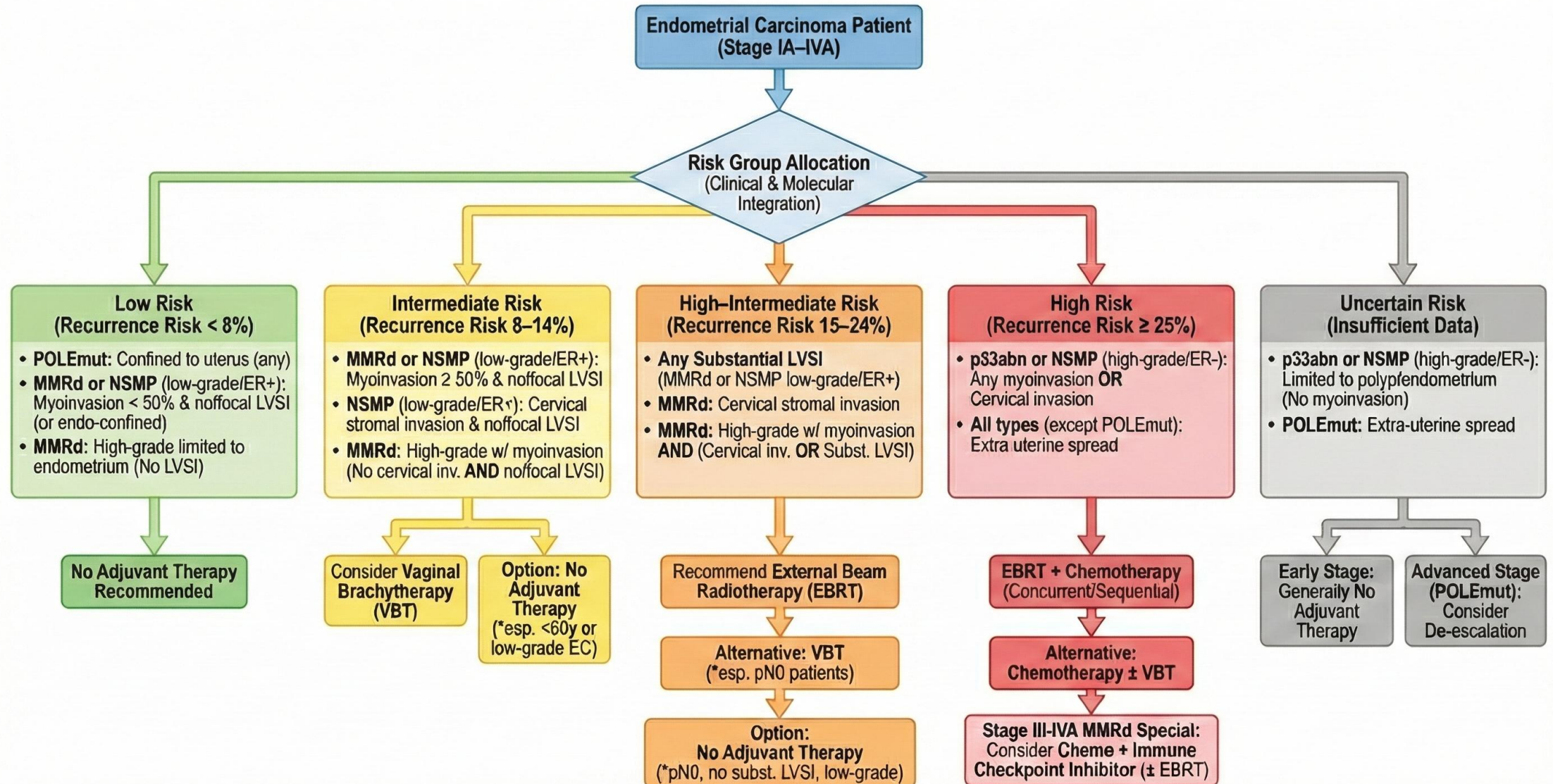
Risk Group	Recurrence Risk (5-yr)	Molecular Profile	Anatomical Extent & LVSI Status
Low Risk	< 8%	POLEmut	Confined to the uterus (with or without cervical invasion)
		MMRd or NSMP (low-grade/ER+)	Confined to endometrium/polyp OR Myoinvasion < 50% AND no/focal LVSI
		MMRd	High-grade histology limited to endometrium/polyp (No LVSI)
Intermediate Risk	8–14%	MMRd or NSMP (low-grade/ER+)	Myoinvasion ≥ 50% AND no/focal LVSI
		NSMP (low-grade/ER+)	Cervical stromal invasion AND no/focal LVSI
		MMRd	High-grade WITH Myoinvasion, BUT No cervical invasion AND No substantial LVSI
High–Intermediate Risk	15–24%	MMRd	Cervical stromal invasion
		MMRd or NSMP (low-grade/ER+)	Substantial LVSI (regardless of myoinvasion depth)
		MMRd	High-grade WITH myoinvasion AND either Cervical invasion OR Substantial LVSI
High Risk	≥ 25%	p53abn or NSMP (high-grade/ER-)	Any myoinvasion OR Cervical stromal invasion
		All types (except POLEmut)	Extra-uterine spread (Ovaries, Serosa, Vagina, Parametrium, Peritoneum, or Lymph nodes)
Uncertain Risk	Unknown	p53abn or NSMP (high-grade/ER-)	Limited to polyp or endometrium (No myoinvasion)
		POLEmut	Extra-uterine spread (Local, regional, or metastatic)

Role of ER status in NSMP group



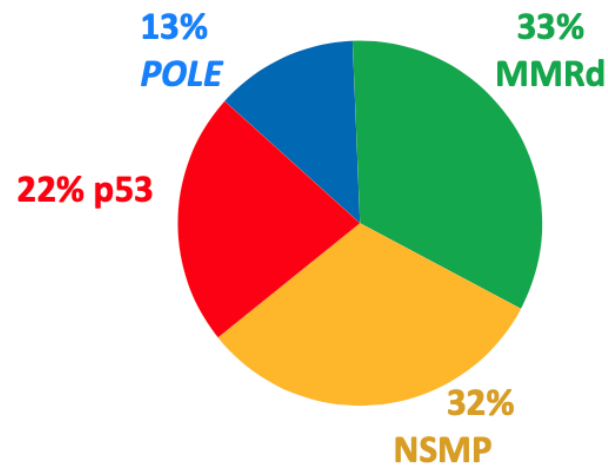
- Strongest model within NSMP: (ER-neg OR grade 3) versus (ER-pos AND grade 1/2)
- Prognosis of NSMP ER-neg similar to p53abn

Adjuvant treatment according to Risk groups

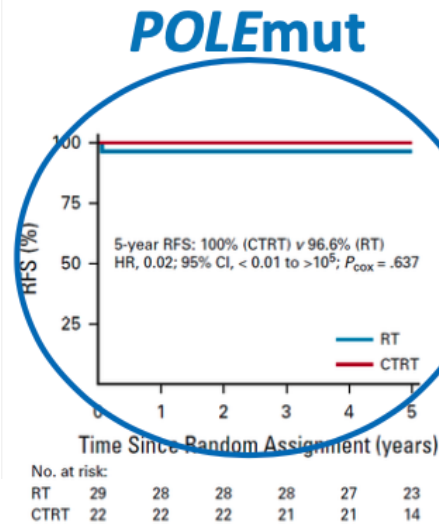
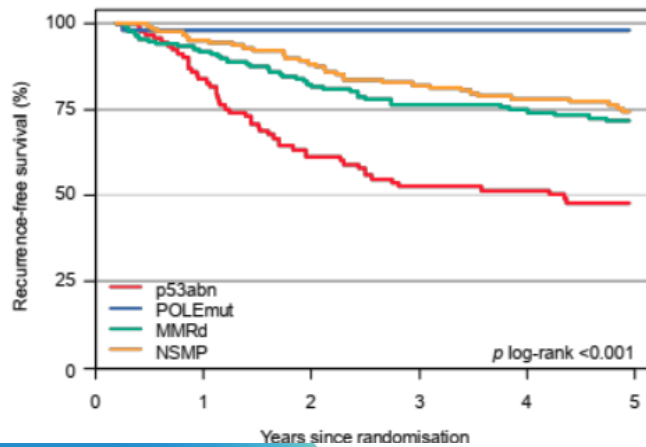


Molecular groups in PORTEC-3

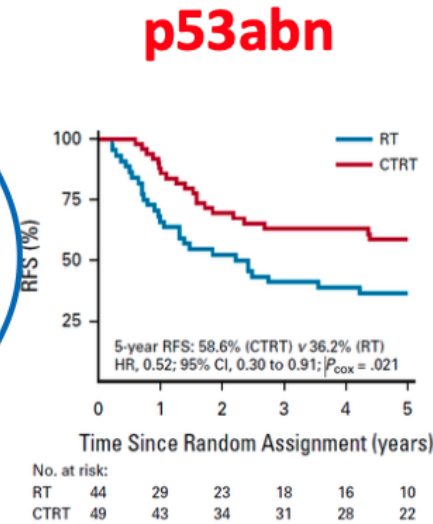
PORTEC-3 high-risk trial cohort
N=410



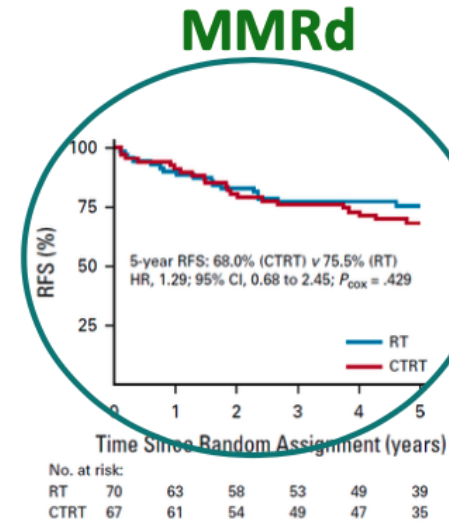
Recurrence free survival



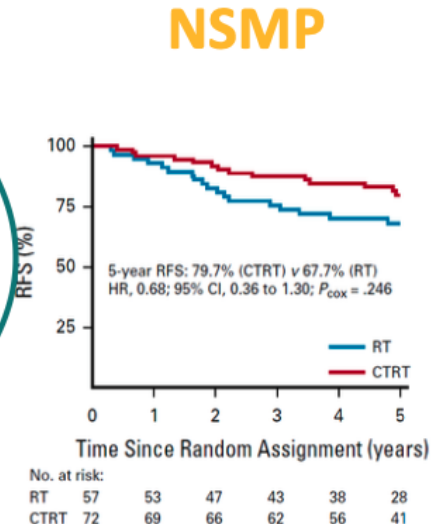
does not relapse
regardless of treatment



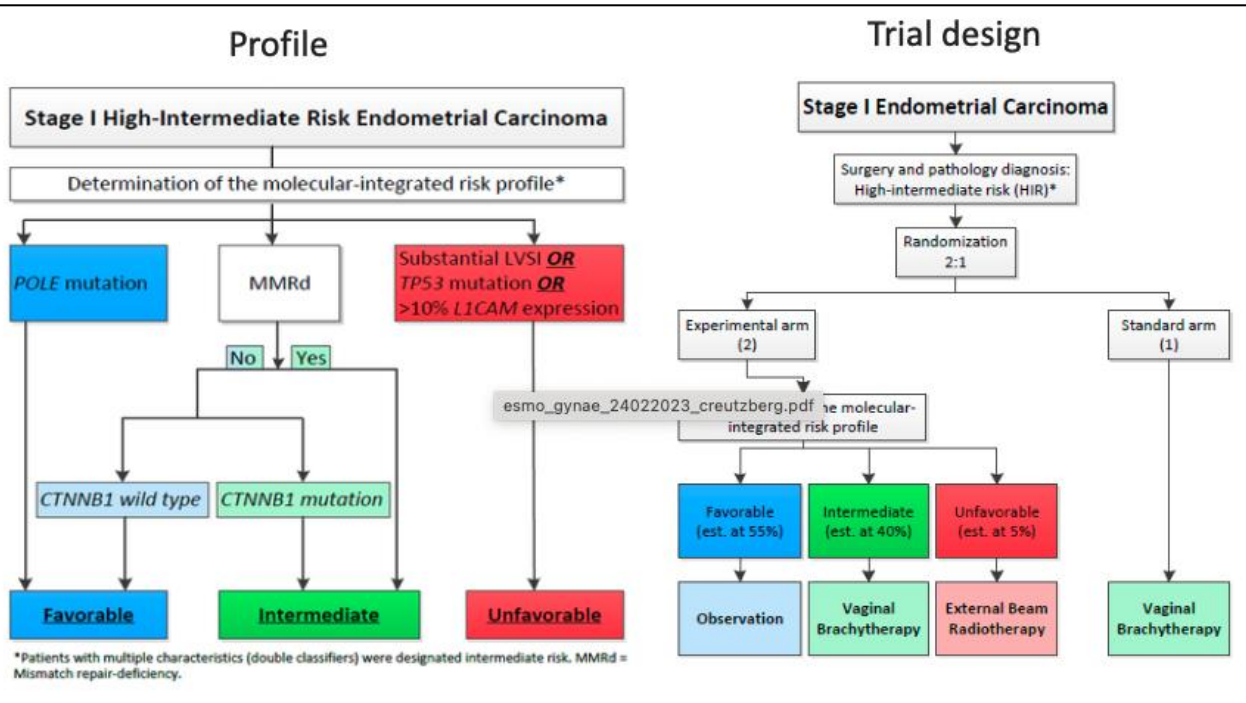
worst prognosis but
greatest benefit from
adjuvant CTX



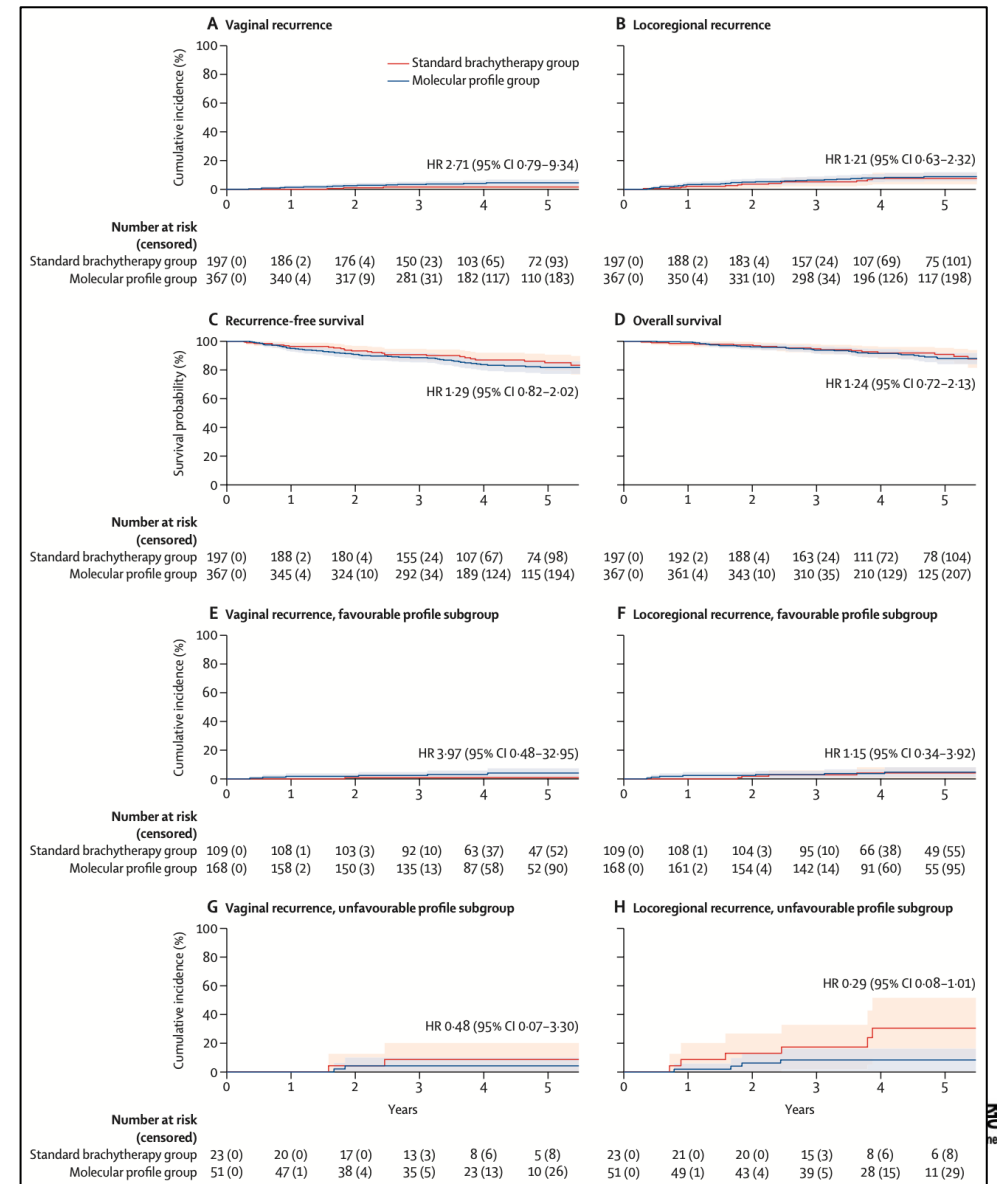
intermediate prognosis
, but little benefit from
adjuvant CTX



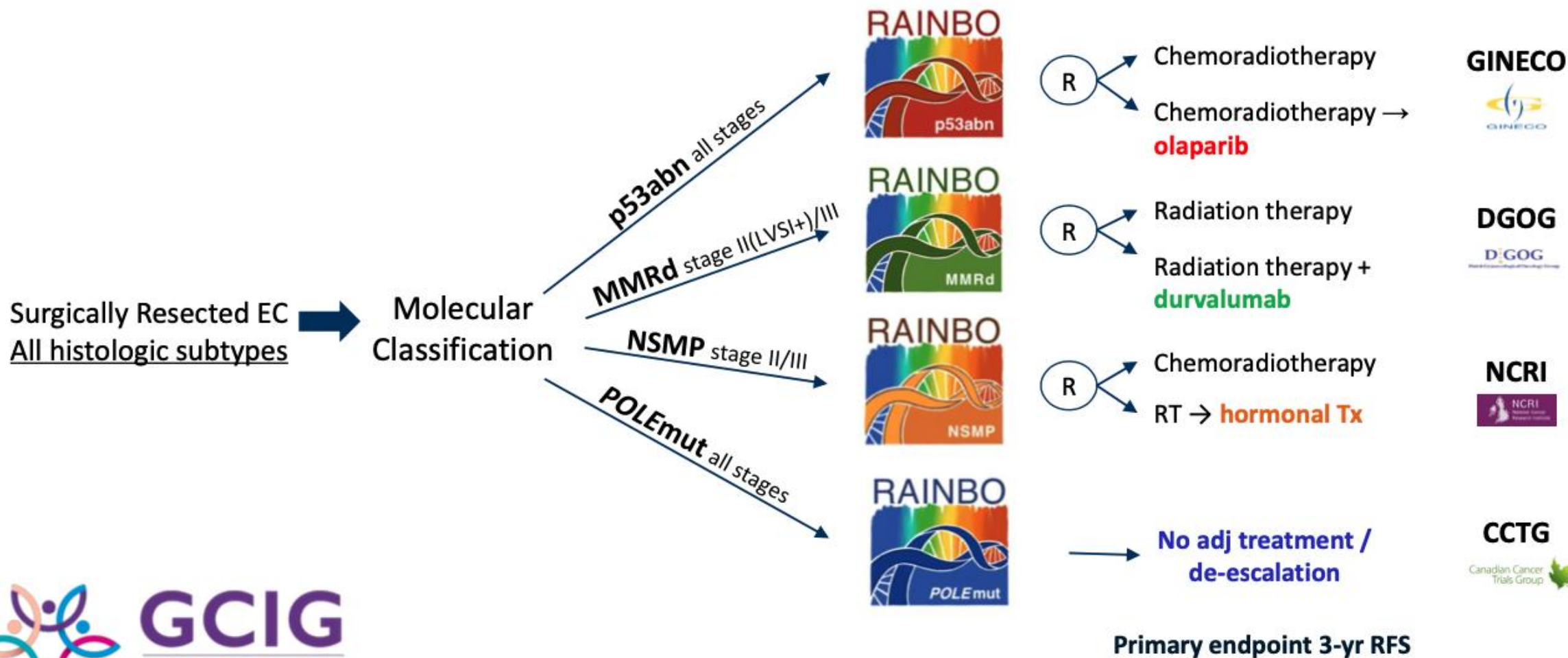
PORTEC-4a: molecular profile-based adjuvant Tx. in H-I risk group



Individualized adjuvant treatment by molecular integrated risk profile spared **46% of patients with a favorable profile from adjuvant treatment**, and reduces both overtreatment and undertreatment.

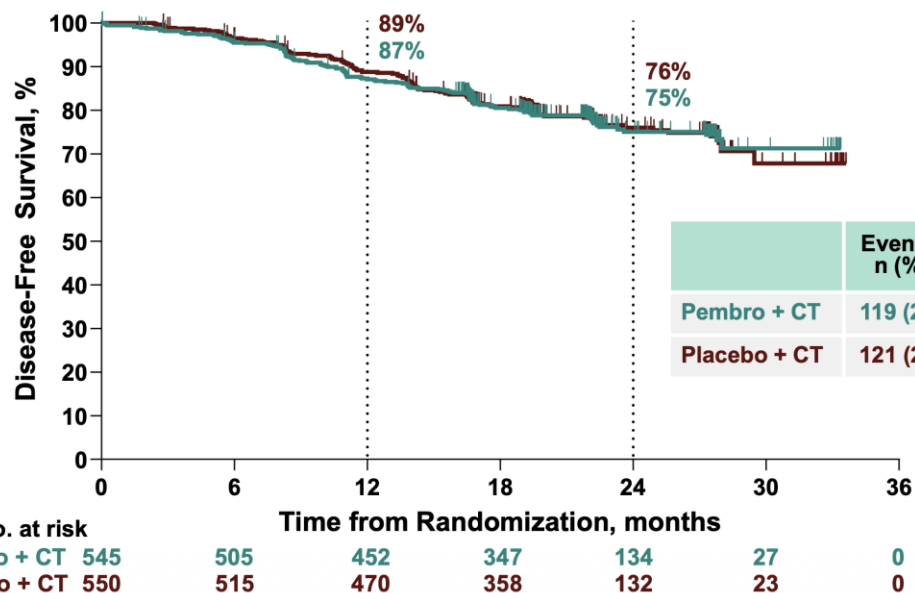
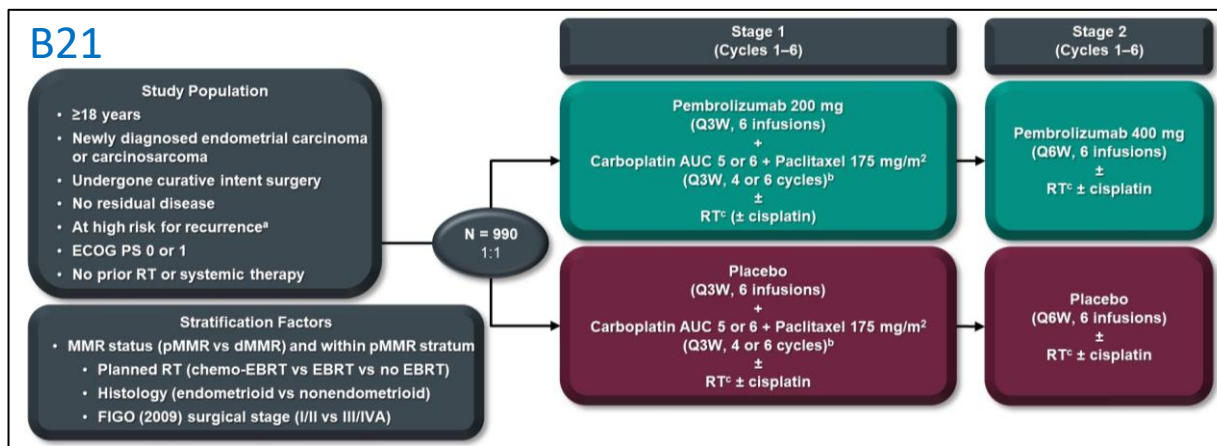


RAINBO: Refining Adjuvant treatment IN endometrial cancer Based ON molecular features



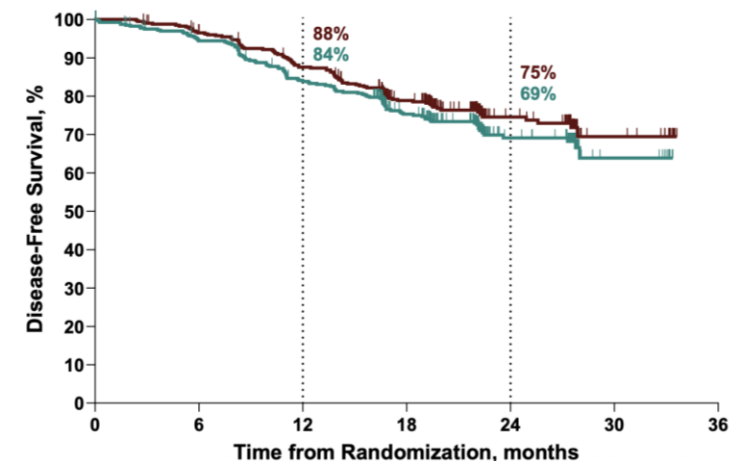
CTX+ICI in high risk EC?

B21



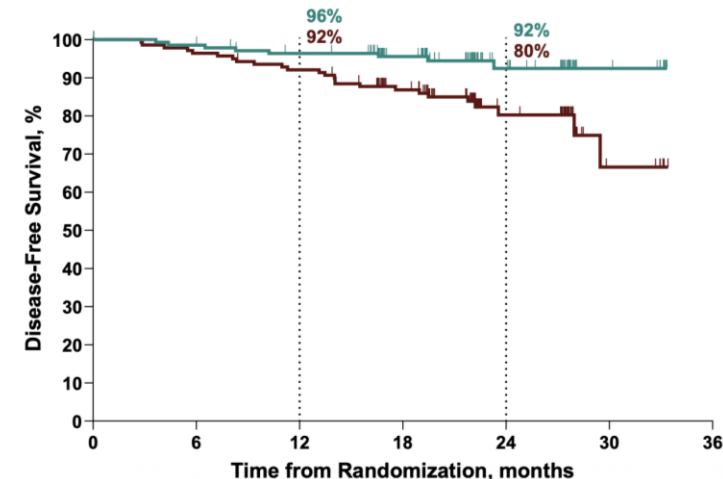
pMMR Subgroup

	Events, n (%)	Median (95% CI), mo	HR (95% CI)
Pembro + CT	111 (27)	NR (NR–NR)	1.20 (0.91–1.57)
Placebo + CT	96 (23)	NR (NR–NR)	



dMMR Subgroup

	Events, n (%)	Median (95% CI), mo	HR (95% CI)
Pembro + CT	8 (6)	NR (NR–NR)	0.31 (0.14–0.69)
Placebo + CT	25 (18)	NR (29.5–NR)	



Domenica, c96: ICI monotherapy in R/M EC

- Histologically confirmed stage III/IV recurrent EC including carcinosarcoma
- ECOG PS 0/1
- No prior systemic therapy
- dMMR

Stratification

- Disease status (newly diagnosed advanced EC vs recurrent EC)
- Histology (endometrioid vs nonendometrioid)

R
N = 350

Pembrolizumab
400 mg IV Q6W

Paclitaxel
175 mg/m² IV Q3W
+
Carboplatin
AUC 6 IV Q3W

- **Primary endpoints:** PFS, OS
- **Secondary endpoints:** ORR, DCR, DOR

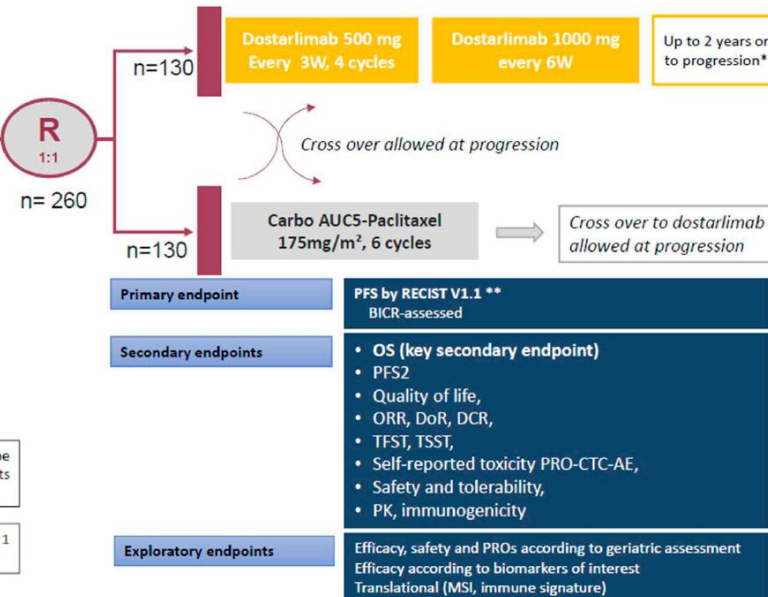
- Endometrial cancer
- MMR deficient (local IHC, confirmed by centralized analysis)
- Metastatic/ advanced
- Stage IIIA to IIIC2 or Stage IV, Relapse

Stratification factors:

- CT adj/ yes- no
- Previous pelvic irradiation/ yes- no
- Disease status / newly diagnosed advanced - relapse

* Continued treatment with dostarlimab beyond 2 years may be considered case by case, only after discussion with the sponsor and its agreement.

** Radiologic scans ~6 weeks up to 6 months, then ~9 weeks up to 1 year or progression and then ~12 weeks thereafter until progression.



Paradigm-shifting data in metastatic or recurrent EC

RUBY Part 1

- Dostarlimab
- Chemotherapy
- Statistically significant PFS dMMR and ITT, OS ITT
- **Not powered for pMMR**

RUBY Part 2

- Dostarlimab + Niraparib
- Chemotherapy
- Statistically significant PFS ITT and PFS pMMR
- OS immature

GY018

- Pembrolizumab
- Chemotherapy
- Statistically significant PFS dMMR and pMMR
- **Not testing for OS**

AtTEnd

- Atezolizumab
- Chemotherapy
- Statistically significant PFS dMMR and ITT
- pMMR didn't benefit
- OS ITT immature

DUO-E

- Durvalumab
- Durvalumab + Olaparib
- Chemotherapy
- Statistically significant PFS ITT for durva and durva + ola
- **Not powered for pMMR or dMMR**

PFS and OS benefit of CTX+ICI in dMMR R/M EC

RUBY Part 1^{1,2,5,8}

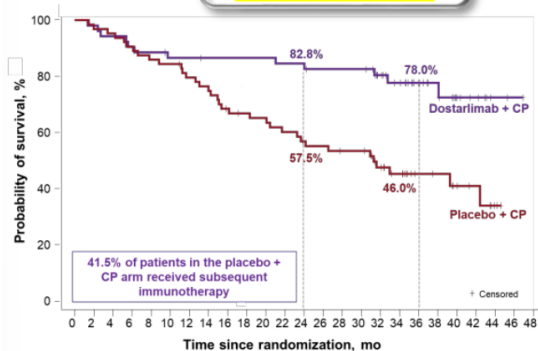
PFS

HR 0.28

(95% CI, 0.16-0.50);
P<0.001

OS

HR 0.32

(95% CI, 0.17-0.63);
Nominal P=0.0002

OS Data	Events, %	Median (95% CI), mo
Dostarlimab + C/P	22.6	NE (NE-NE)
Placebo + C/P	53.8	31.4 (20.3-NE)
OS data maturity	39.8%	
Median follow-up, mo	36.6	

GY018^{3-5,9}

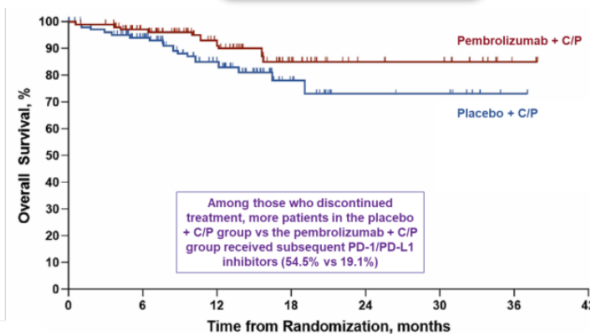
PFS

HR 0.30

(95% CI, 0.19-0.48);
P<0.001

OS

HR 0.55

(95% CI, 0.25-1.19);
P=0.0617

OS Data	Events, %	Median (95% CI), mo
Pembrolizumab + C/P	9.1	NR (NR-NR)
Placebo + C/P	15	NR (NR-NR)
OS data maturity	18%	
Median follow-up, mo	13.3-13.7	

AtTend^{6,10}

PFS

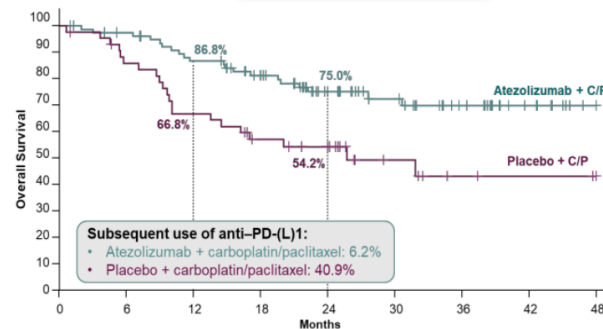
HR 0.36

(95% CI, 0.23-0.57);
P=0.0005

OS

HR 0.41

(95% CI, 0.22-0.76)



OS Data	Events, %	Median (95% CI), mo
Atezolizumab + C/P	24.6	NE (NE-NE)
Placebo + C/P	47.7	25.7 (13.5-NE)
OS data maturity	--	
Median follow-up, mo	--	

DUO-E^{7,11}

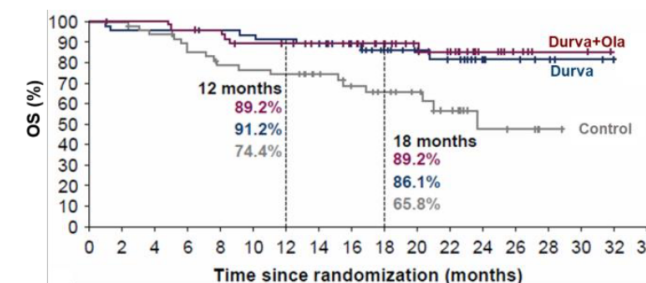
PFS

HR 0.42

(95% CI, 0.22-0.80);
Durva + C/P arm

OS

HR 0.34

(95% CI, 0.13-0.79)
Durva + C/P arm

OS Data	Events, %	Median (95% CI), mo
Durvalumab + C/P	15.2	NR (NR-NR)
Placebo + C/P	36.7	23.7 (16.9-NR)
OS data maturity	21.7%	
Median follow-up, mo	--	

PFS and OS benefit of CTX+ICI in pMMR R/M EC

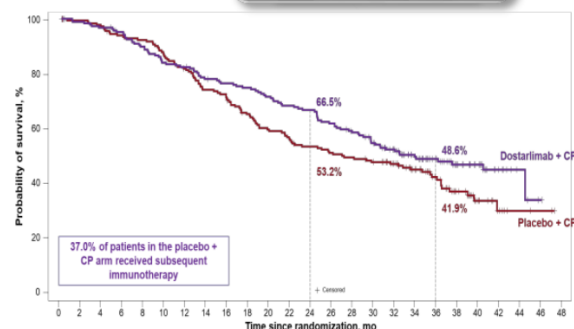
RUBY Part 1^{1,2,5,6}

PFS

HR 0.76
(95% CI, 0.59-0.98)

OS

HR 0.79
(95% CI, 0.60-1.04);
nominal $P=0.0493$



OS Data	Events, %	Median (95% CI), mo
Dostarlimab + C/P	50.5	34.0 (28.6-NE)
Placebo + C/P	59.2	27.0 (21.5-35.6)
OS data maturity	54.8%	
Median follow-up, mo	37.5	

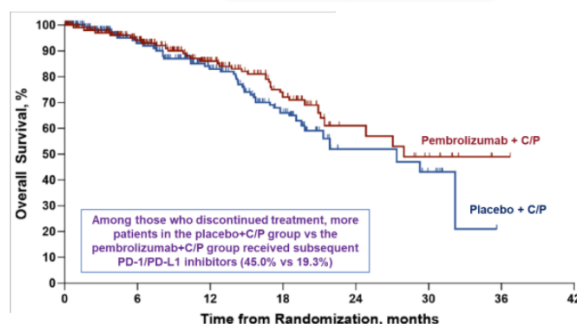
GY018^{3-5,7}

PFS

HR 0.54
(95% CI, 0.41-0.71);
 $P<0.001$

OS

HR 0.79
(95% CI, 0.53-1.17)
 $P=0.1157$



OS Data	Events, %	Median (95% CI), mo
Pembrolizumab + C/P	15.3	27.9 (21.4-NR)
Placebo + C/P	18.3	27.4 (19.5-NR)
OS Data maturity	27.2%	
Median follow-up, mo	8.4-8.8	

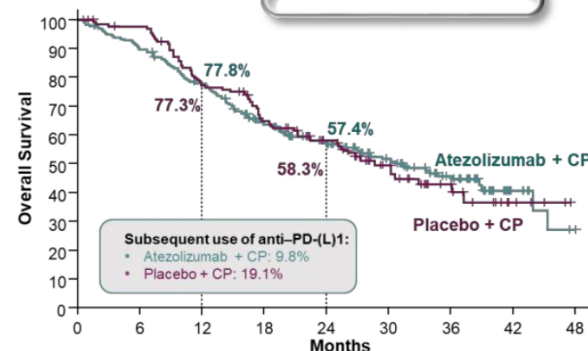
AtTEnd⁶

PFS

HR 0.92
(95% CI, 0.73-1.16);

OS

HR 1.00
(95% CI, 0.74-1.35)



OS Data	Events, %	Median (95% CI), mo
Atezolizumab + C/P	47.2	31.5 (25.0-38.9)
Placebo + C/P	46.4	28.6 (22.4-37.2)
OS Data maturity	--	
Median follow-up, mo	--	

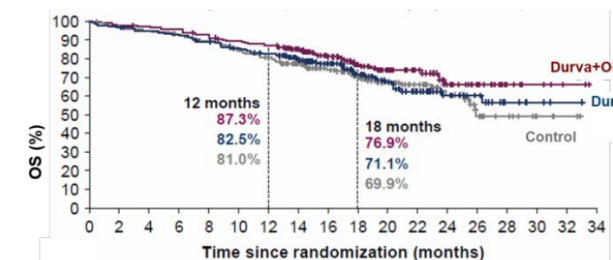
DUO-E^{5,8}

PFS

HR 0.77
(95% CI, 0.60-0.97);
Durva + C/P arm

OS

HR 0.91
(95% CI, 0.64-1.30)
Durva + C/P arm



OS Data	Events, %	Median (95% CI), mo
Durvalumab + C/P	30.2	NR (NR-NR)
Placebo + C/P	33.3	25.9 (25.1-NR)
OS Data maturity	29.2%	
Median follow-up, mo	--	

Benefit of PARPi addition to CTX+ICI

RUBY Part 2¹

PFS

OS

HR 0.63

(95% CI, 0.44-0.91);

P=0.0060

Dostar + nira + C/P
arm

HR 0.76

(95% CI, 0.59-0.98)

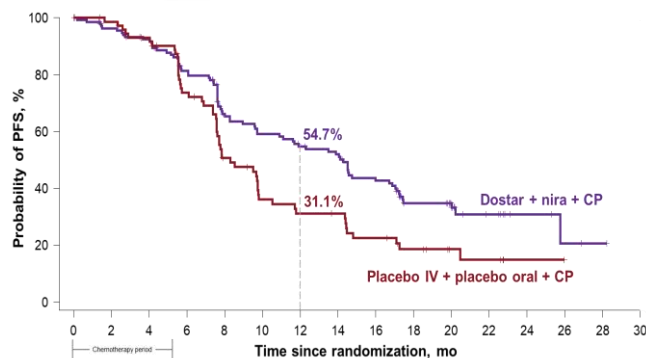
Dostar + C/P arm

The trial is
ongoing for OS
follow-up

HR 0.79

(95% CI, 0.60-1.04);

nominal P=0.0493



	Events, %	Median (95% CI), mo
Dostarlimab + Niraparib + C/P	55.6	14.3 (9.7-16.9)
Placebo + C/P	71.6	8.3 (7.6-9.8)
PFS data maturity		61.1%
Median follow-up, mo		19.1

DUO-E^{2,3}

PFS

OS

HR 0.57

(95% CI, 0.44-0.73);

Durva + Ola + C/P arm

HR 0.77

(95% CI, 0.60-0.97);

Durva + C/P arm

HR 0.69

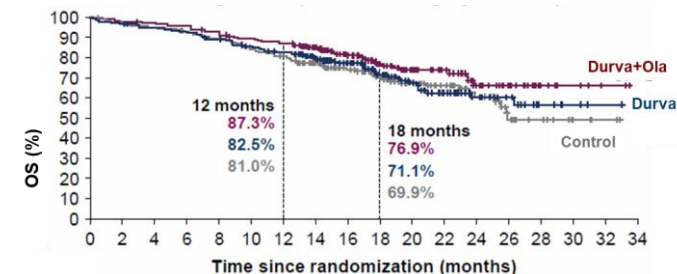
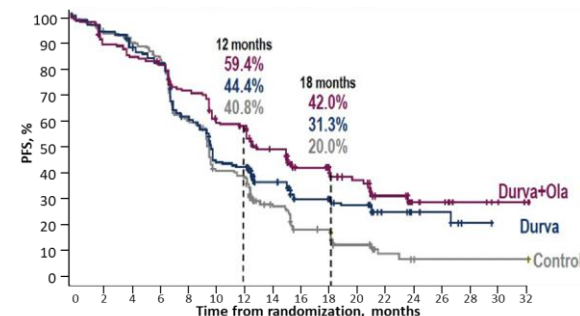
(95% CI, 0.47-1.00)

Durva + Ola + C/P
arm

HR 0.91

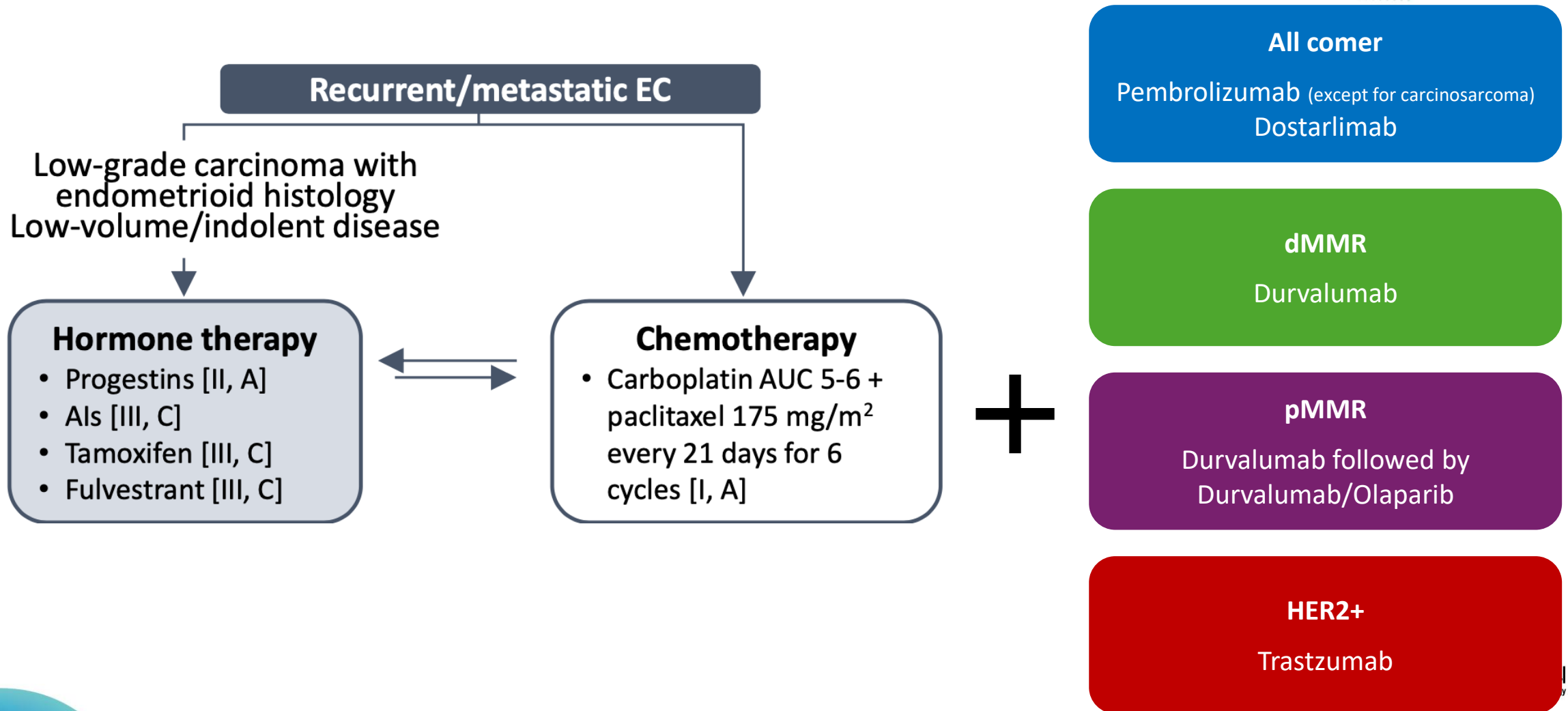
(95% CI, 0.64-1.30)

Durva + C/P arm

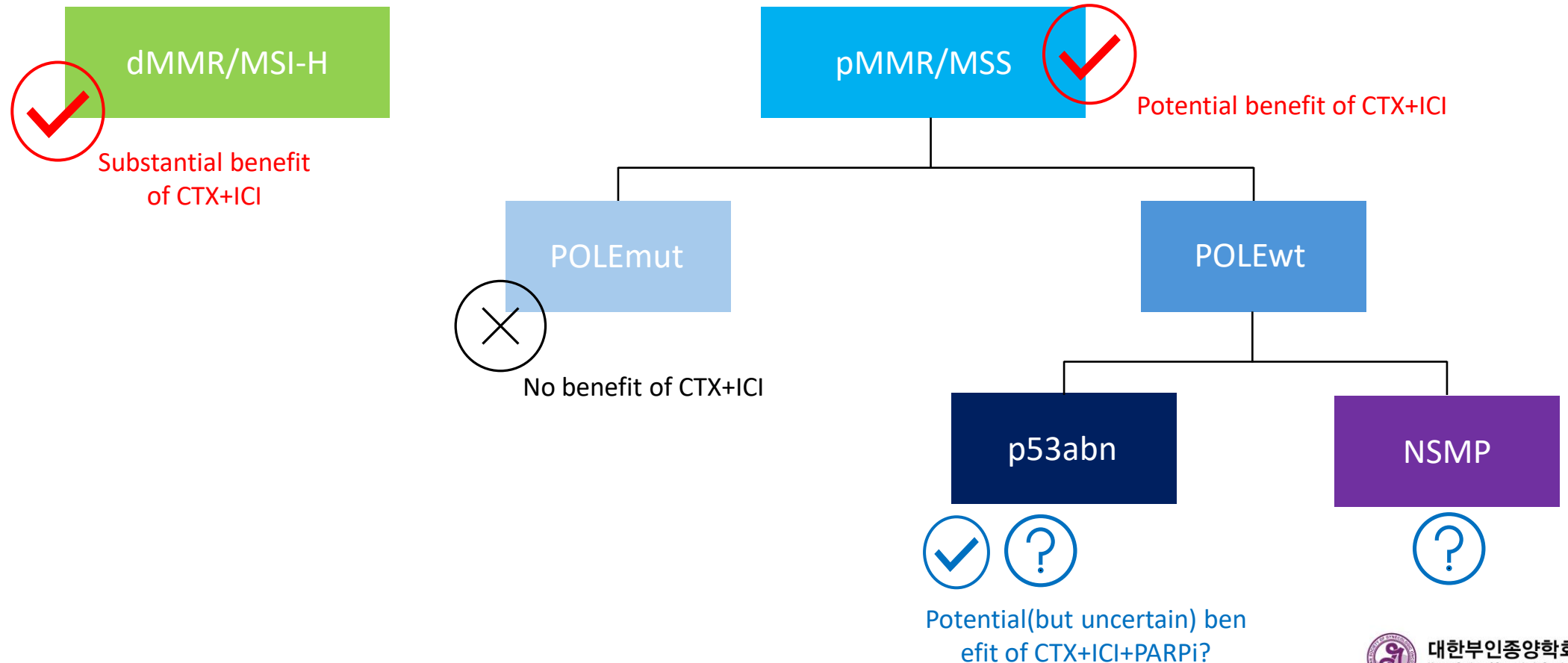


	Control (N=192)	Durva (N=192)	Durva+Ola (N=191)
Events, n (%)	148 (77.1)	124 (64.6)	108 (56.5)
Median PFS (95% CI),* months	9.7 (9.2-10.1)	9.9 (9.4-12.5)	15.0 (12.4-18.0)
HR (95% CI) vs Control†		0.77 (0.60-0.97)	0.57 (0.44-0.73)
HR (95% CI) vs Durva†			0.76 (0.59-0.99)

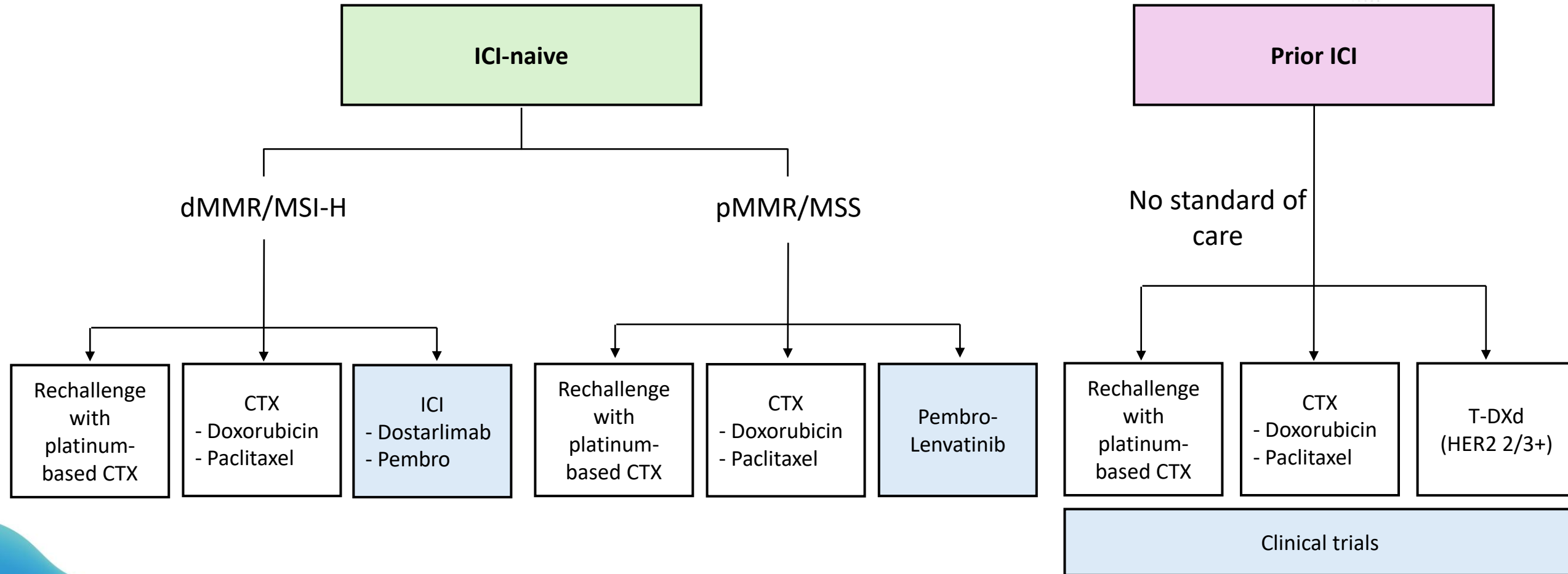
1st line systemic treatment in R/M EC



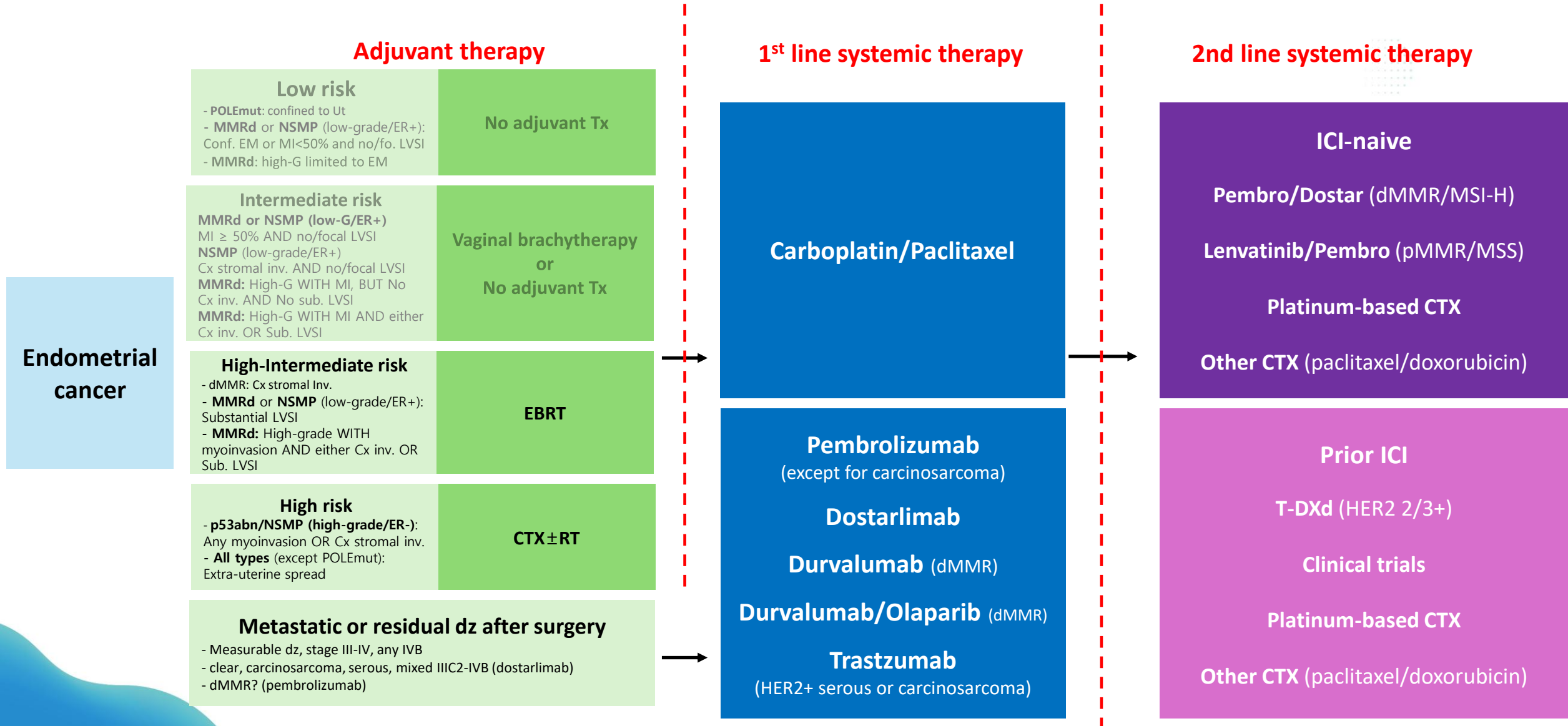
CTX+ICI for metastatic or recurrent EC according to molecular classification



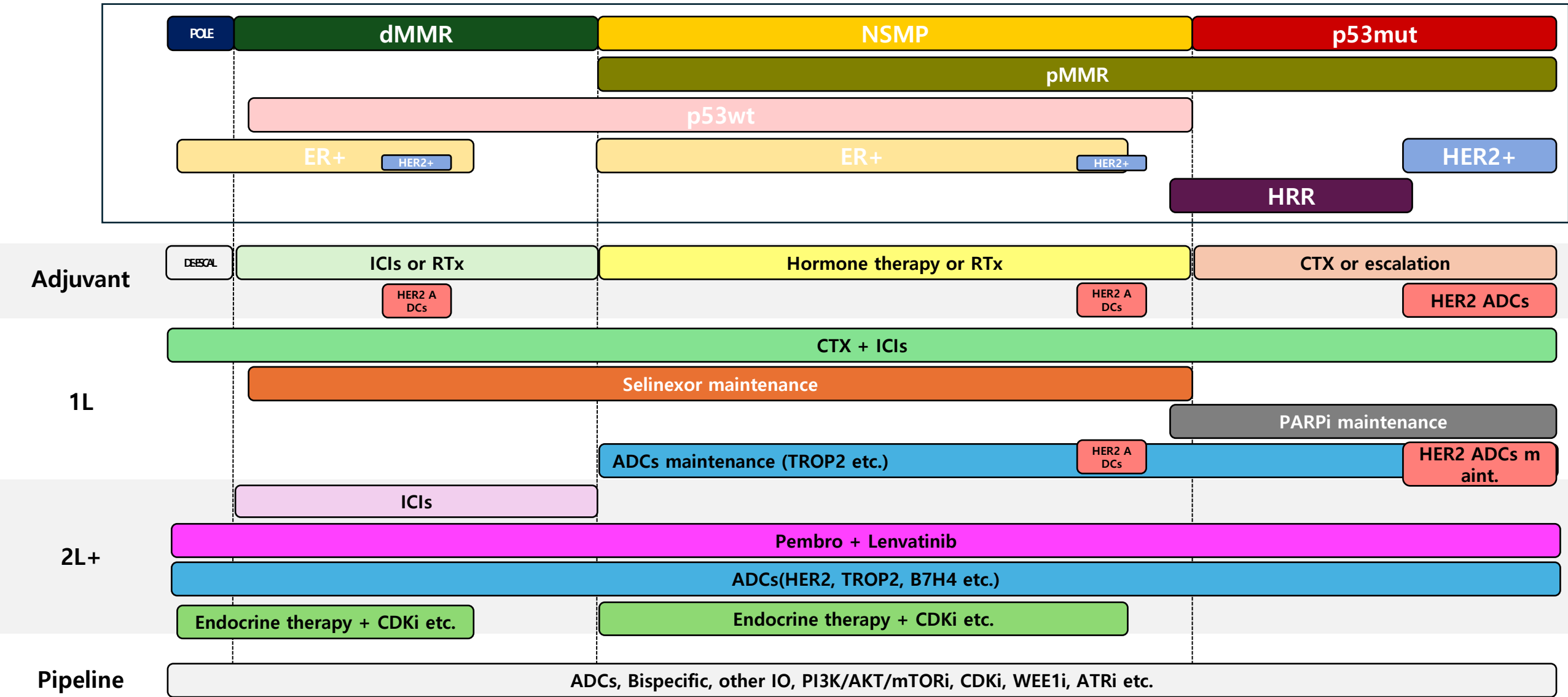
2nd line systemic therapy for recurrent EC



2nd line systemic therapy for recurrent EC



EC Tx. strategies according to molecular profile



2026년 대한부인종양학회 제7회 동계학술대회 with Chemo-TIP Review

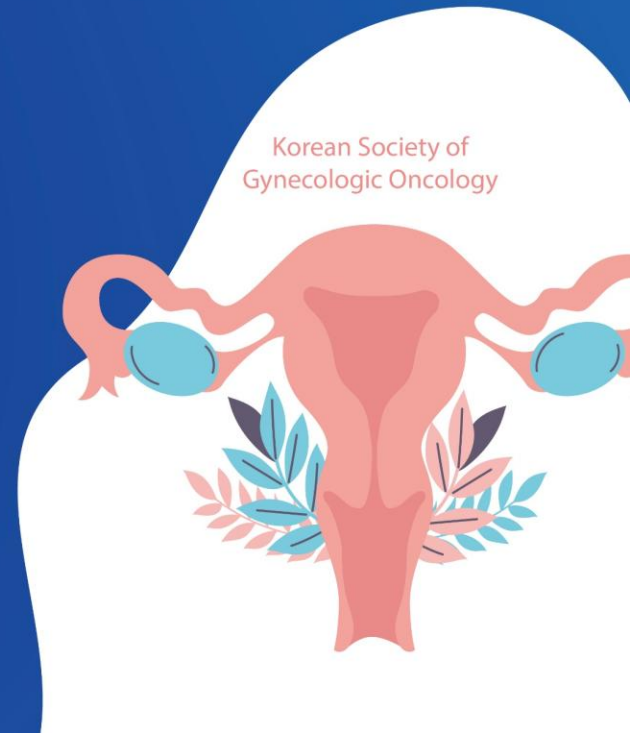
일자 2026년 1월 17일 (토)

장소 세종대학교 컨벤션센터

Thank you for your attention!



대한부인종양학회
Korean Society of Gynecologic Oncology

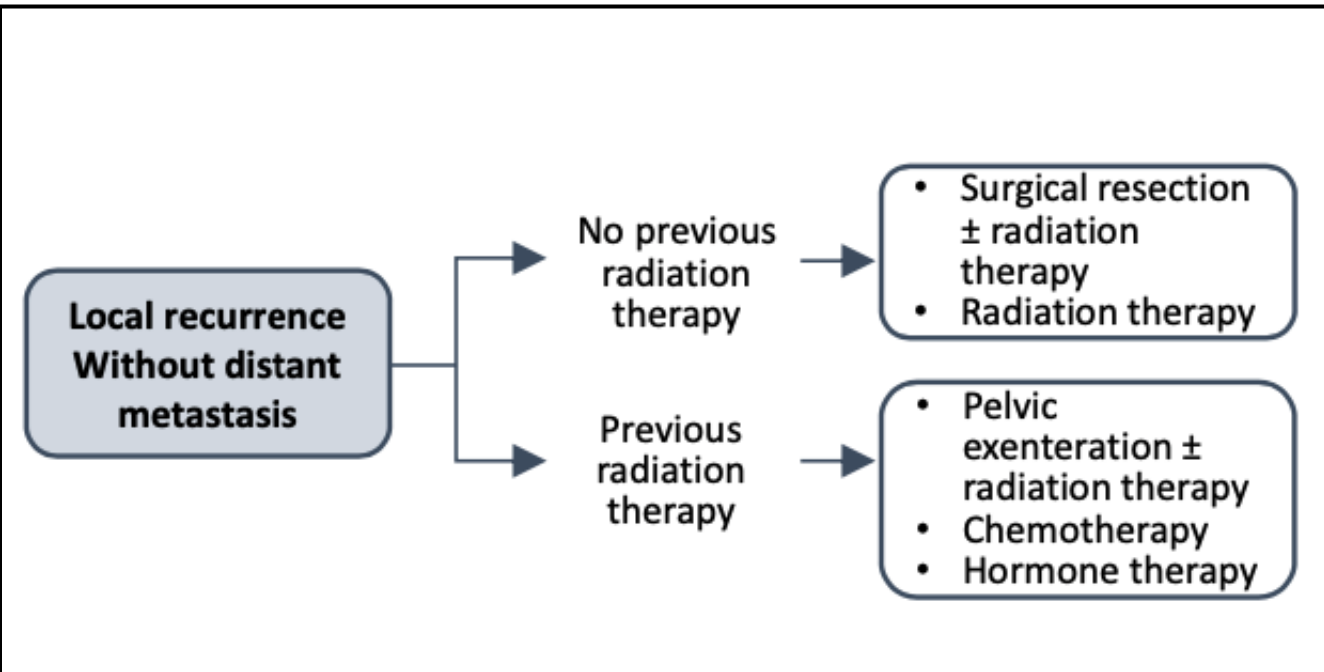


Back-up: Molecular profile of EC

	Endometrioid	Endometrioid	Endometrioid	Serous & High-grade Endometrioid	Carcinosarcoma	Clear cell
	POLE-ultramutated	MSI-hypermutated	MSS CN-low	CN-high serous-like	NA	NA
Mutational load						
SCNA load						
MSI	Mixed MSI	MSI high	MSI low	MSI low		
Grade	1, 2, 3	1, 2, 3	1, 2	3	High	High
ER status	ER+ ; ER+	ER+ ; ER-	ER+			
TP53 mutation	35%	low	low	90%	60-90%	35%
PI3K alterations	PTEN M+ (94%) PIK3CA M+ (71%) PIK3R1 M+ (65%)	PTEN M+ (75-85%) PIK3CA M+ (50-55%) PIK3R1 M+ (30-40%)		PTEN (11%) PIK3CA A+ (45%) PIK3CA M+ (35%) PIK3R1 M+ (12%)	PTEN M+ (19%) PIK3CA M+ (35%) PIK3CA A+ (14%)	PTEN loss (80%) PIK3CA (18%)
KRAS mutation	>50%	35%	low		17%	0%
ERBB alterations	0	low	low	ErbB2 A+ 30-40% (serous)	ErbB2 A+ (13%) ErbB3 A+/M+ (13%)	ErbB2 M+ (12%)
FGFR amplification or mutation	FGFR1 A+/M+ (7%) FGFR2 A+/M+ (13%) FGFR3 A+/M+ (5%)				FGFR3 A+ (20%)	
Wnt/ β catenin			CTNNB1 M+ (>50%)			
Others	ARID1A M+ (75%) PD1/PD-L1 over-expr. POLE exonuclease domain mutations	ARID1A M+ (35-40%) PD1/PD-L1 overexpr.	ARID1A M+ (35-40%)	PPP2R1A M+ (20%) FBXW7 M+ (20% of UC) HRD (15-20%)	HRD (22-53%) ARID1A (25%) PPP2R1A (28%) FBXW7 M+ (35%) CCNE1 A+ (42%) Sox17 A+ (25%)	ARID1A (25%) TERT promoter mutations

Back-up: Treatment for loco-regional recurrence

KSGO guideline



ESMO guideline

