



STANDARD TREATMENTS AND NEW DIRECTIONS IN GYNAECOLOGICAL CANCERS

MILANO June 26th-29th, 2025

Responsabili Scientifici:
NICOLETTA COLOMBO, FRANCESCO RASPAGLIESI



New Approaches in Platinum Resistant Ovarian Cancer: the ADC's innovation

**The therapeutic algorithm of recurrent disease:
how ADCs could change clinical practice?**

Ilaria Colombo

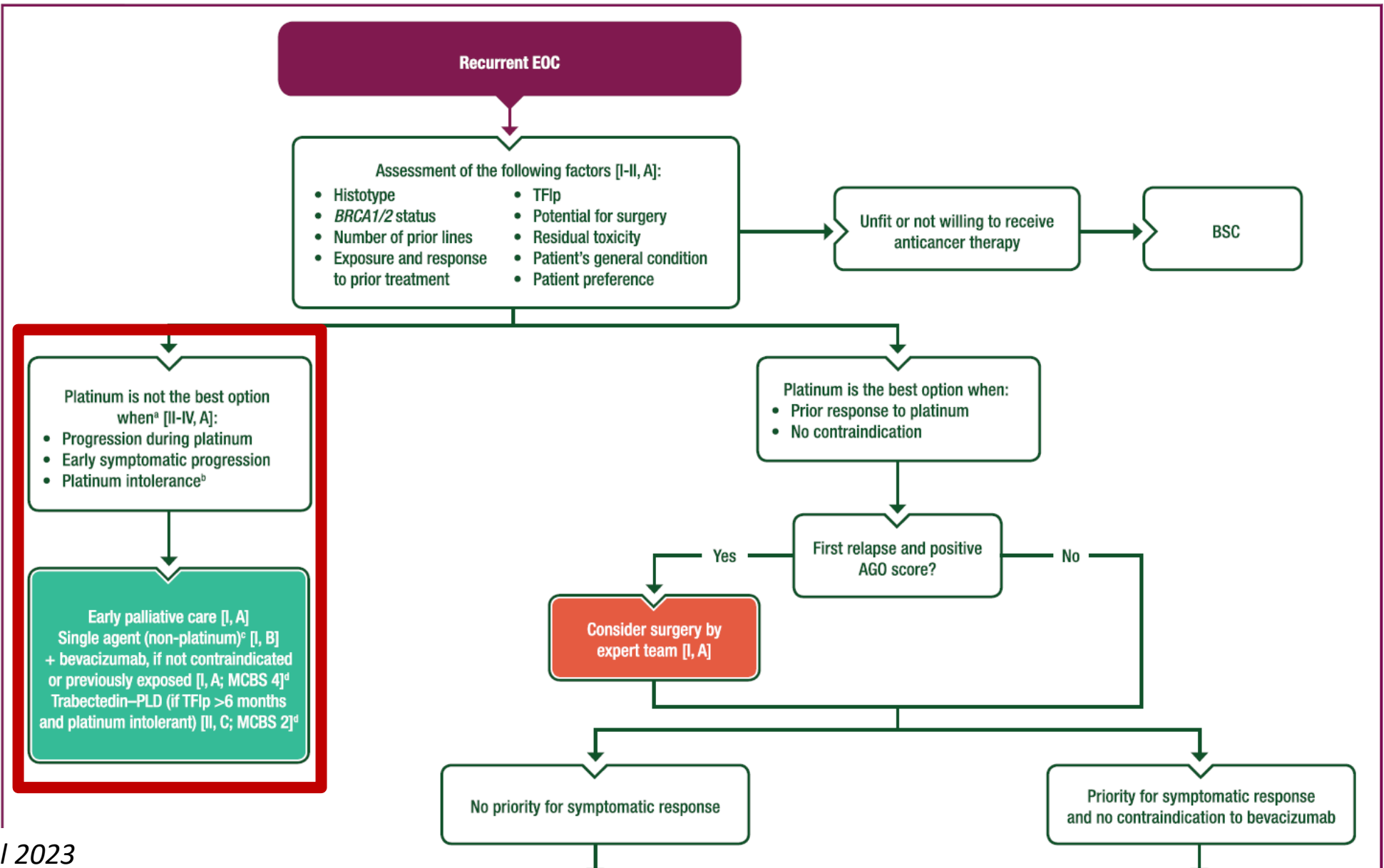
Oncology Institute of Southern Switzerland (IOSI)

Conflict of interest

Ilaria Colombo

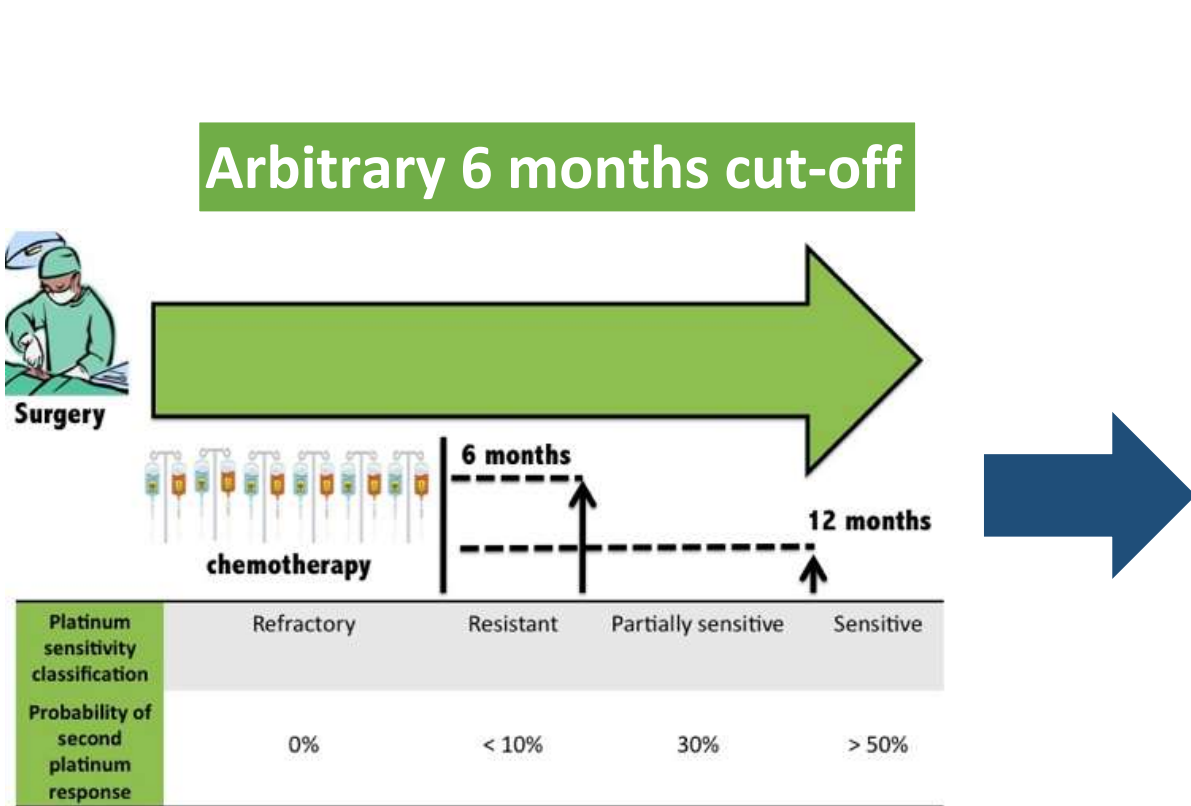
- Consultancy/Advisory/Expert Opinion: AZ, GSK, MSD, BionTech, Abbvie, Incyte, Beigene
- Institutional grants for clinical trials (PI): MSD, Bayer, Vivesto, Incyte, AZ, Orion, Tolremo, Debio.
- Member of the Advisory Board for the European School of Oncology (ESO)
- Vice President of the Gynecological Cancer Project Group for the Swiss Group for Clinical Cancer Research (SAKK)

Guidelines



Gonzalez-Martin, Ann Oncol 2023

Evolution of platinum-resistance definition

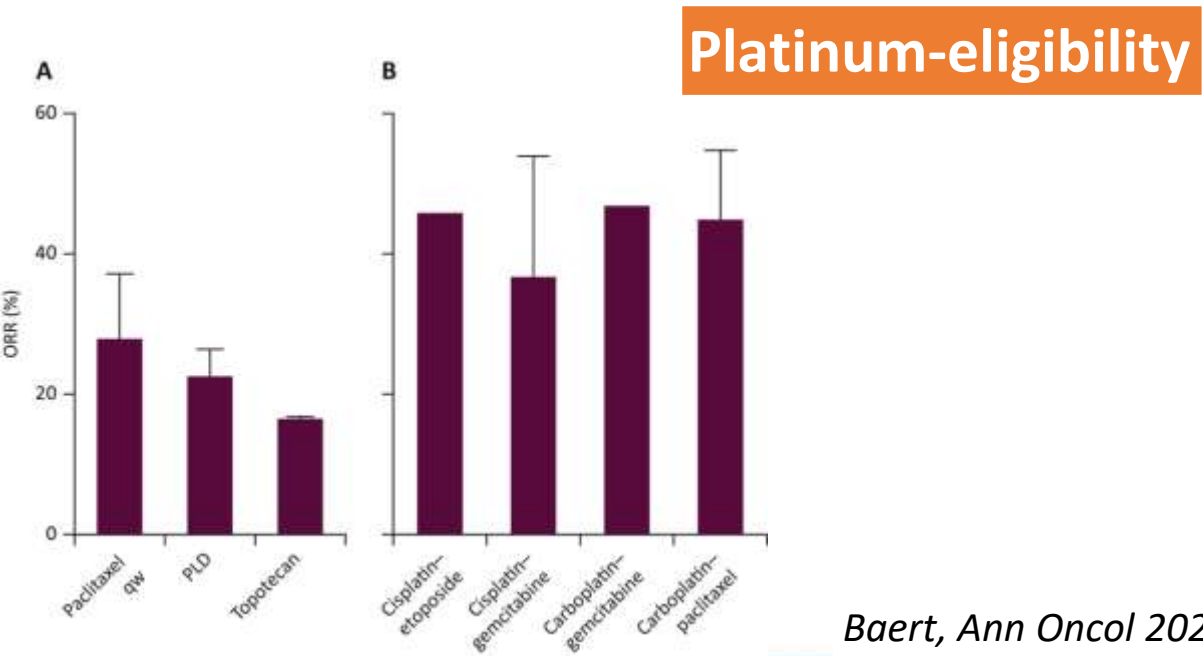


Tapia, 2013

REVIEW

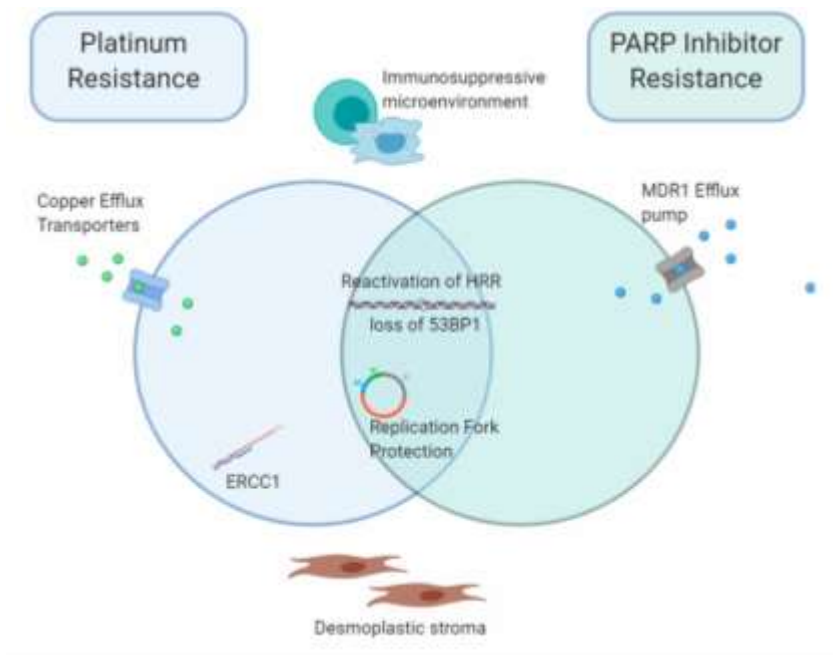
The systemic treatment of recurrent ovarian cancer revisited

T. Baert^{1,2*}, A. Ferrero³, J. Sehouli⁴, D. M. O'Donnell⁵, A. González-Martín⁶, F. Joly⁷, J. van der Velden⁸, P. Blecharz⁹, D. S. P. Tan^{10,11}, D. Querleu¹², N. Colombo^{13,14}, A. du Bois¹⁵ & J. A. Ledermann^{15,1}

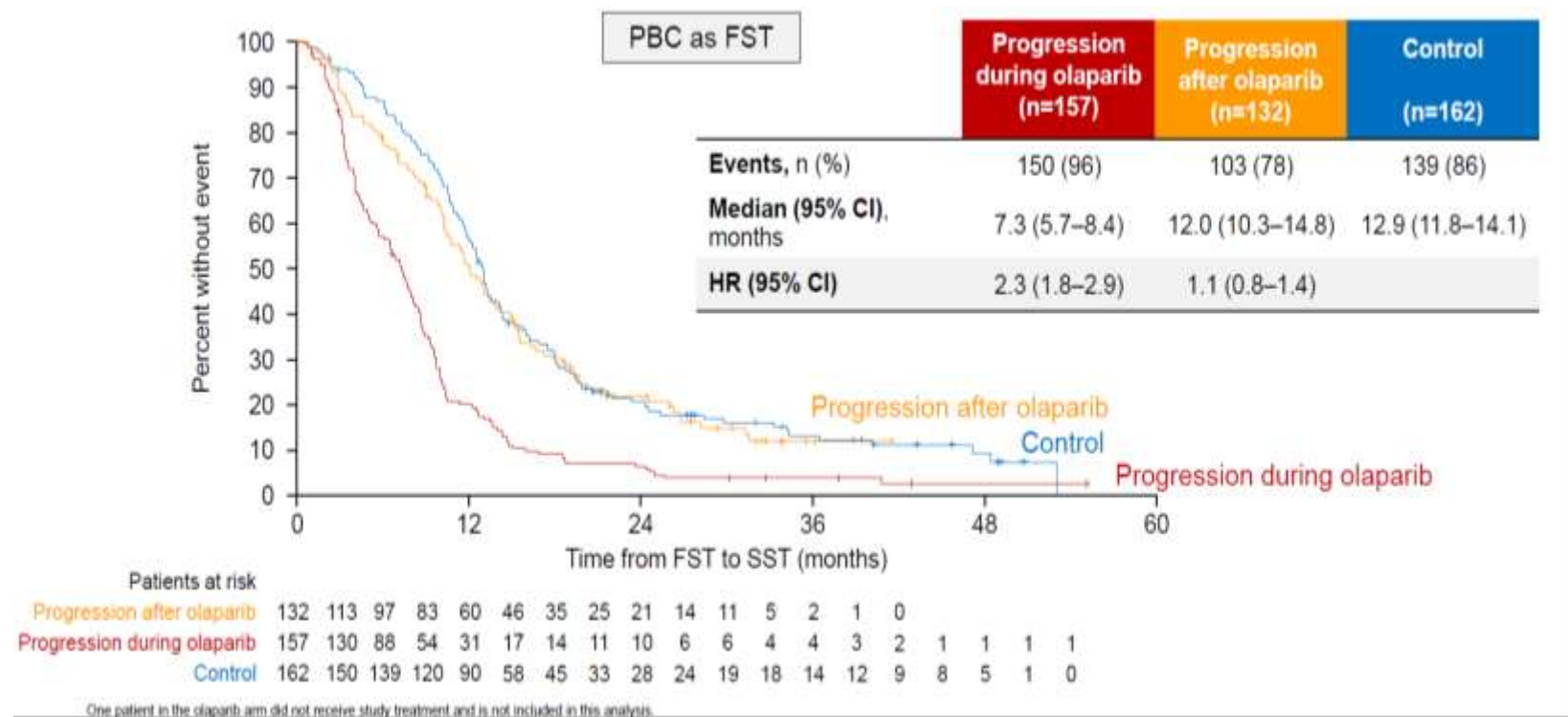


Baert, Ann Oncol 2021

Progression to PARPi



Effect of platinum after PD to PARPi in PAOLA1 trial

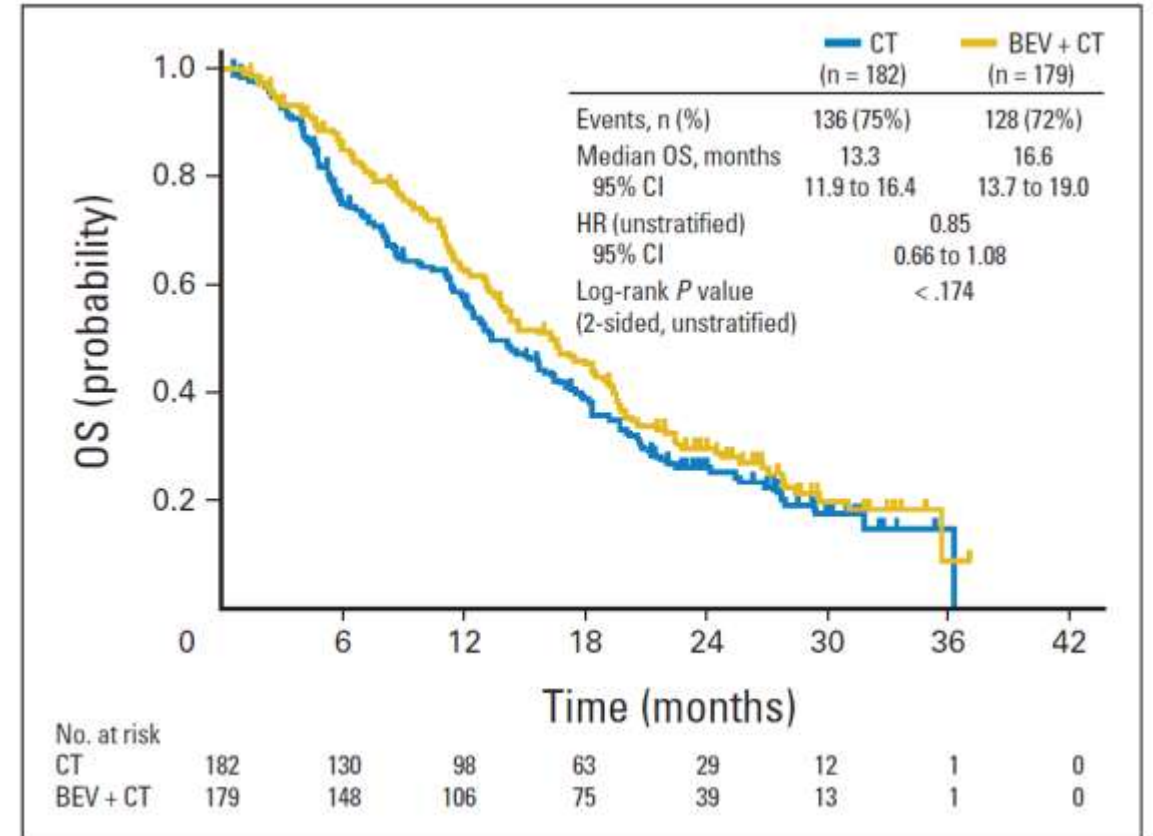
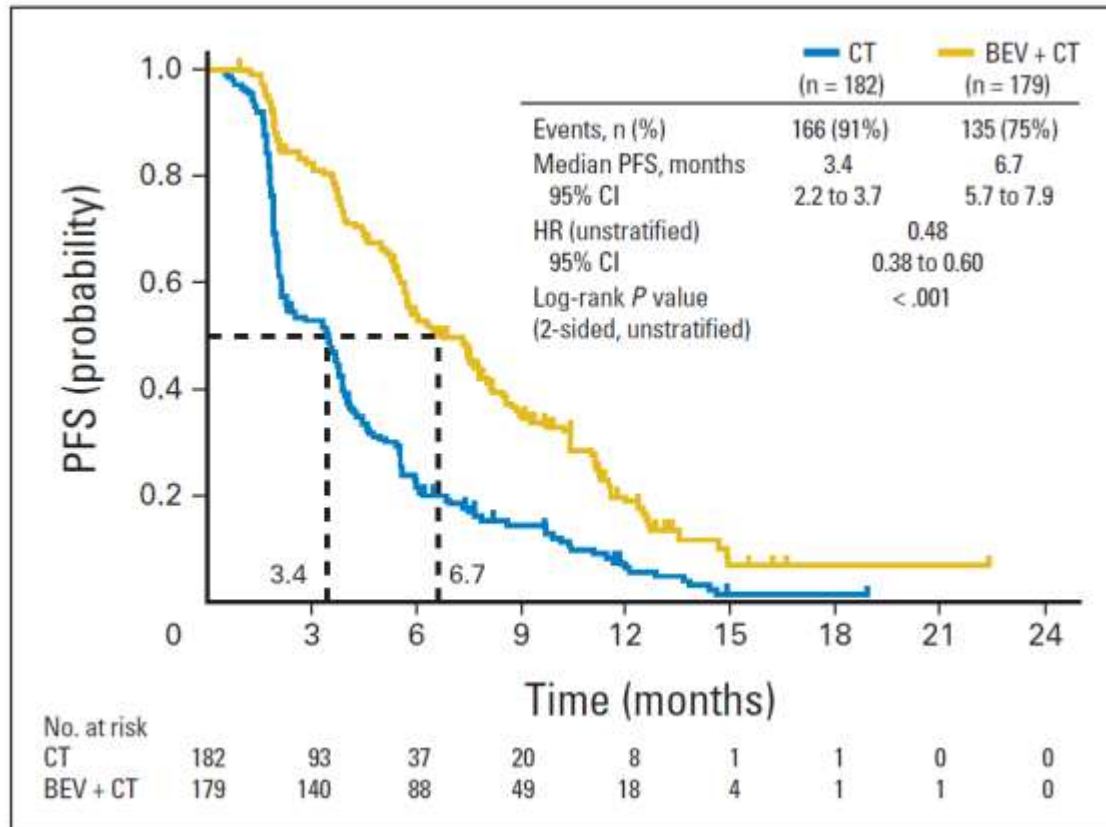


McMullen, Cancers 2020

Harter, Ann Oncol 2025

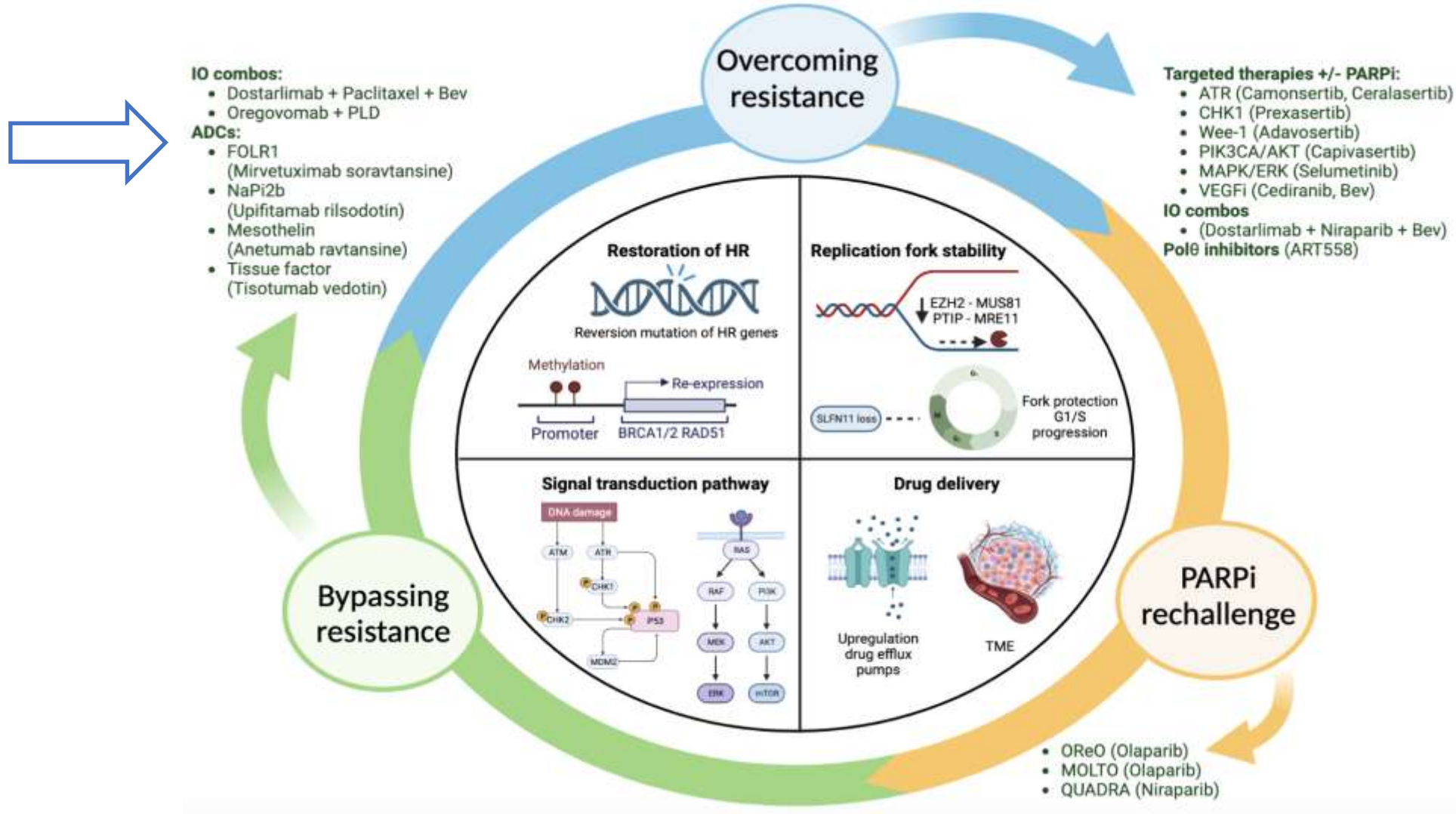
Target therapies in platinum resistant ovarian cancer

AURELIA Trial: Bevacizumab plus single agent chemotherapy



Pujade-Lauraine, JCO 2014

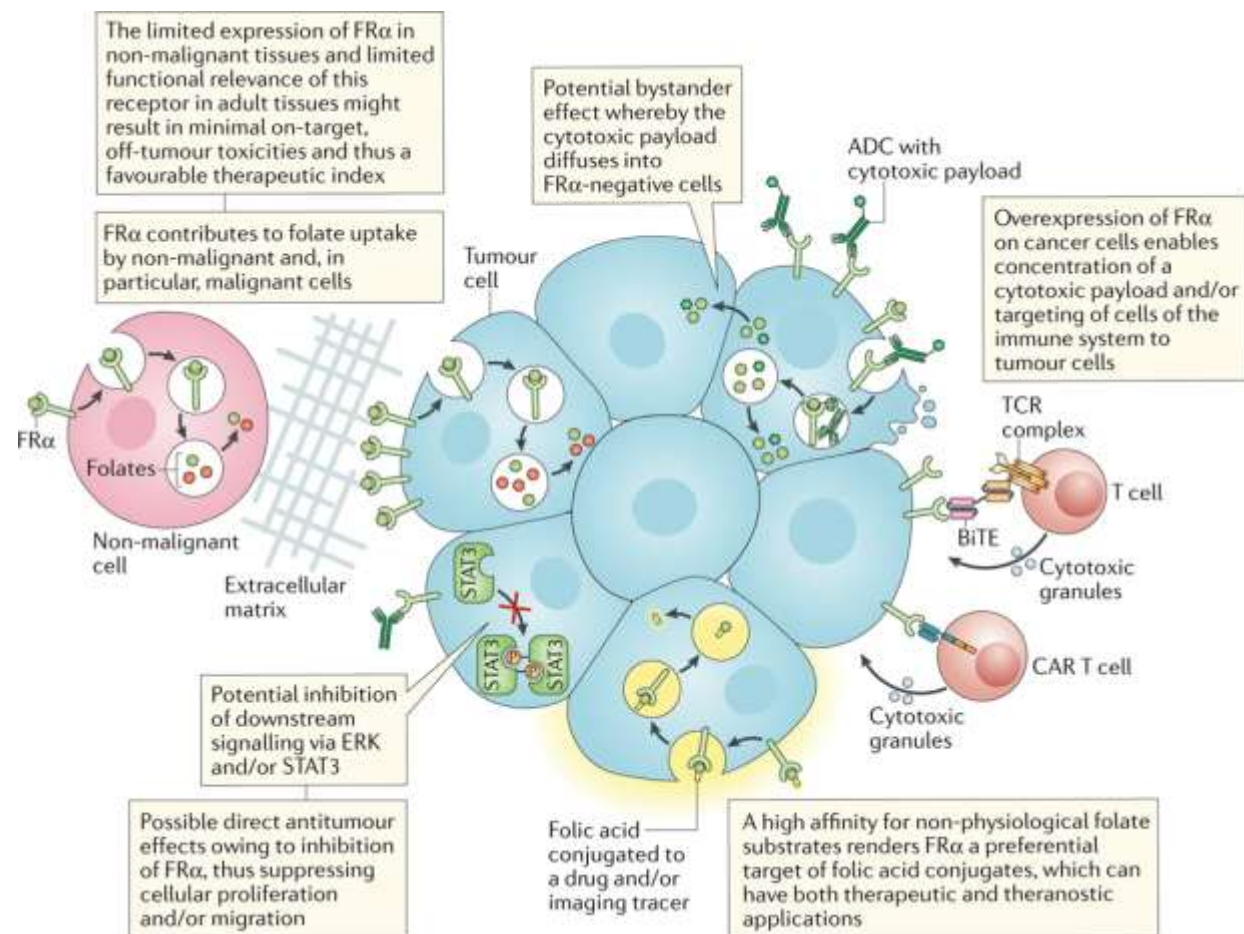
Treatment options to overcome resistance



Gonzalez-Ochoa E, Oza AM CCR 2023

XXII ASSEMBLEA MaNGO | STANDARD TREATMENTS AND NEW DIRECTIONS IN GYNAECOLOGICAL CANCERS
MILANO 26th-27th-28th June 2025

Mirvetuximab Soravtansine in Ovarian Cancer

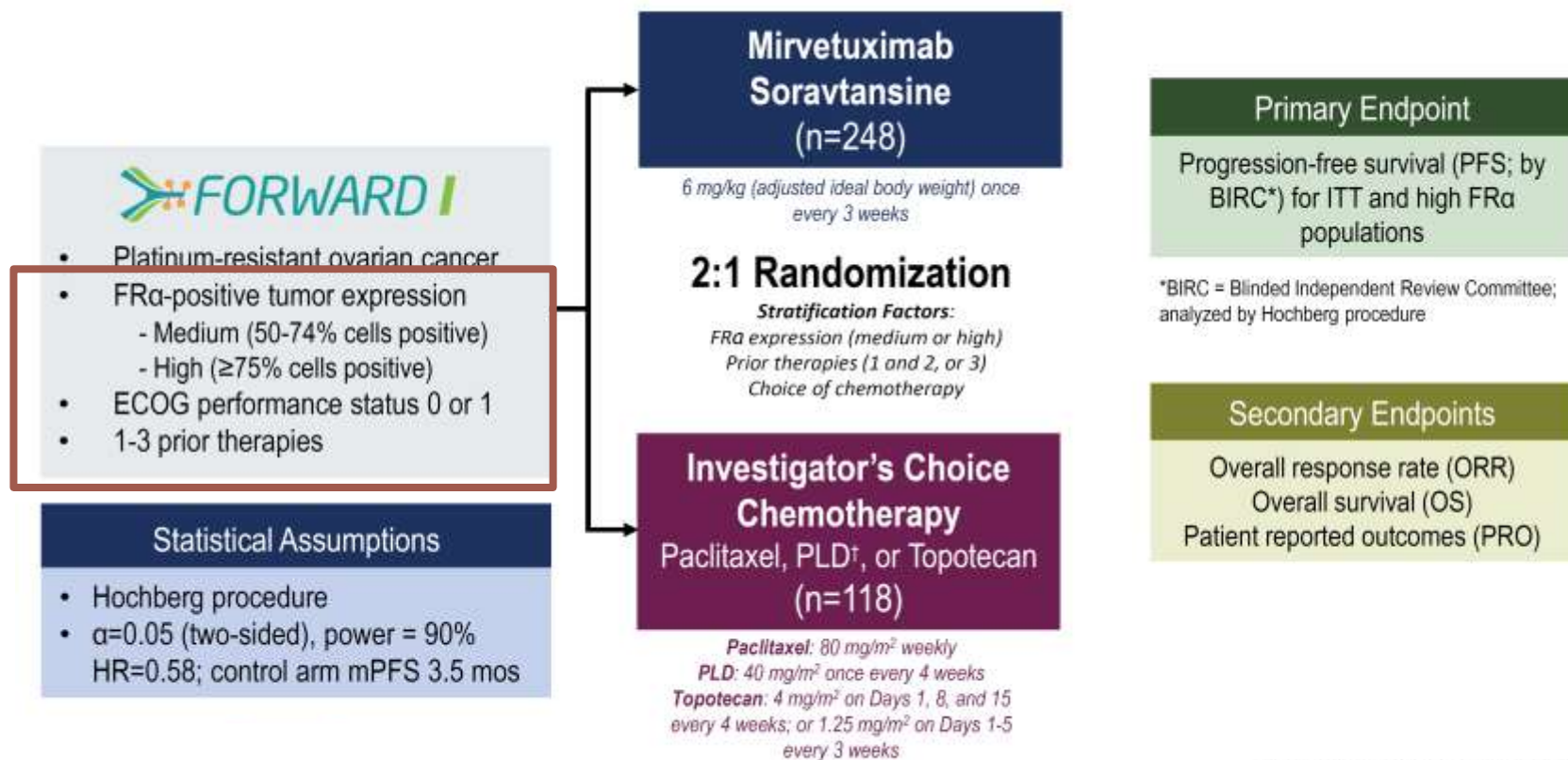


- **Folate Receptor alfa (FR α) is a cell surface folate receptor** that mediates folate transport into epithelial cells
- Involved in **pro-survival signals** in ovarian cancer
- **Expression is limited in normal cells**
- **High expression on the surface of epithelial ovarian cancer cells** as determined by immunohistochemistry

Scaranti, Nat Rev Clin Oncol 2020

Mirvetuximab Soravtansine: FORWARD 1 trial

Phase 3 trial in medium-high FR α

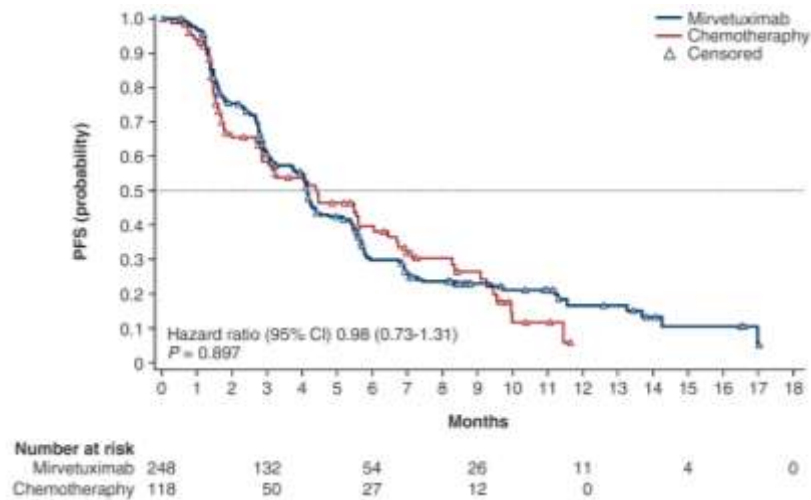


[†]Pegylated liposomal doxorubicin
ClinicalTrials.gov Identifier: NCT02631876

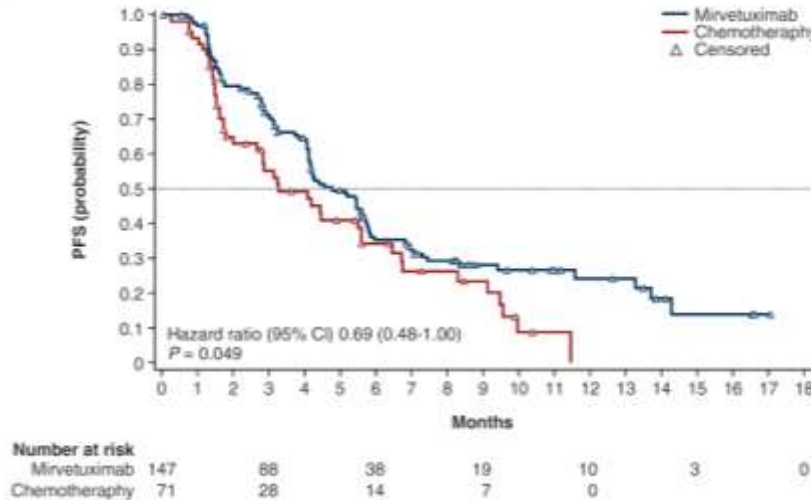
Moore, Ann Oncol 2021

Mirvetuximab Soravtansine: FORWARD 1 trial

ITT population



FRα high

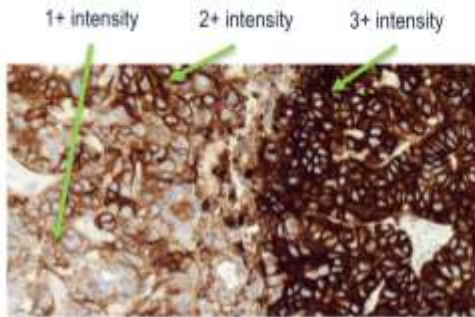


The importance of the biomarker

PS2+ Scoring

- In all prior studies, PS2+ scoring was used to assess FRα expression
- Eligibility determined by staining intensity and percentage of tumor cells staining at 0, 1+, 2+, or 3+

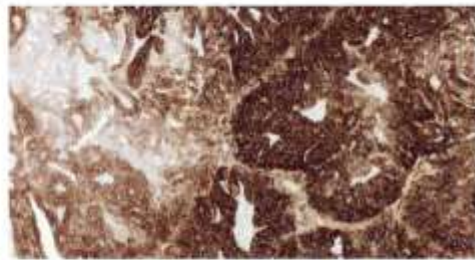
PS2+ Scoring
Positive: ≥ 50% of tumor cells with FRα membrane staining with ≥ 2+ intensity



10X Scoring

- In FORWARD I, a simplified scoring method to assess FRα expression was implemented
- Eligibility was determined by scoring just the percentage of cells with membrane staining by ≤10X magnification, without regard to intensity

10X Scoring
Positive: ≥ 50% of tumor cells with FRα membrane staining visible at 10X microscope objective

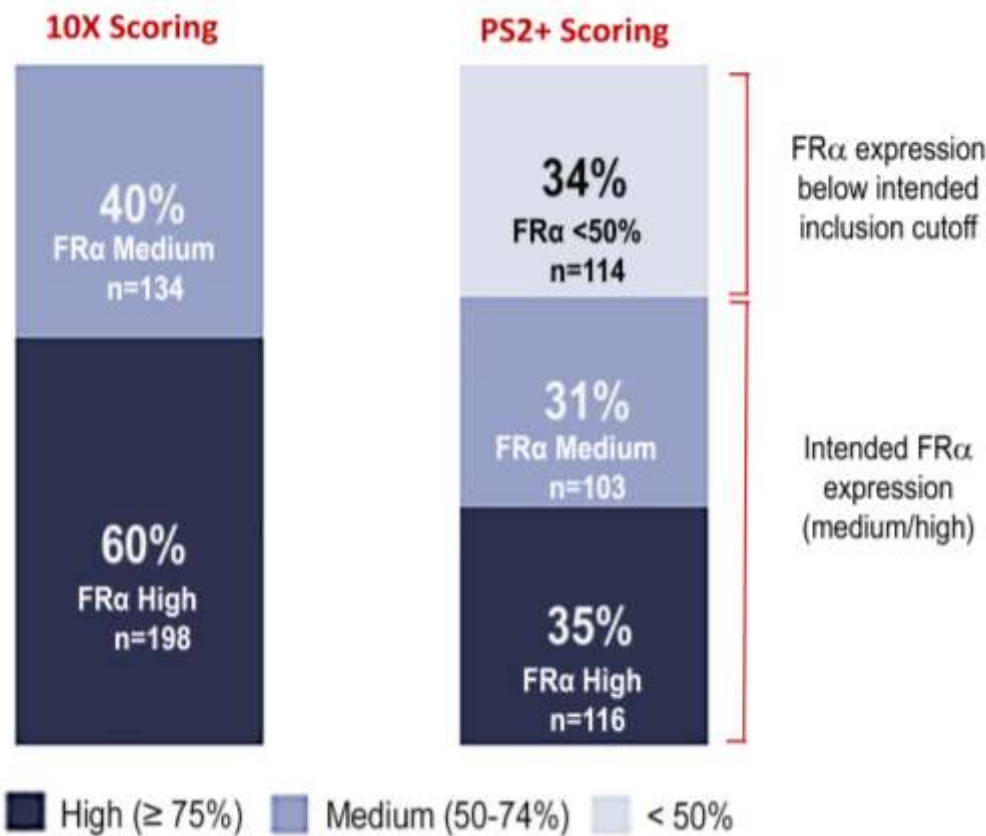


Bridging study indicated that 10X scoring was sufficient for patient selection
Exploratory analyses suggest that the change in scoring method from PS2+ to 10X introduced a population of patients into FORWARD I with lower levels of FRα expression than intended

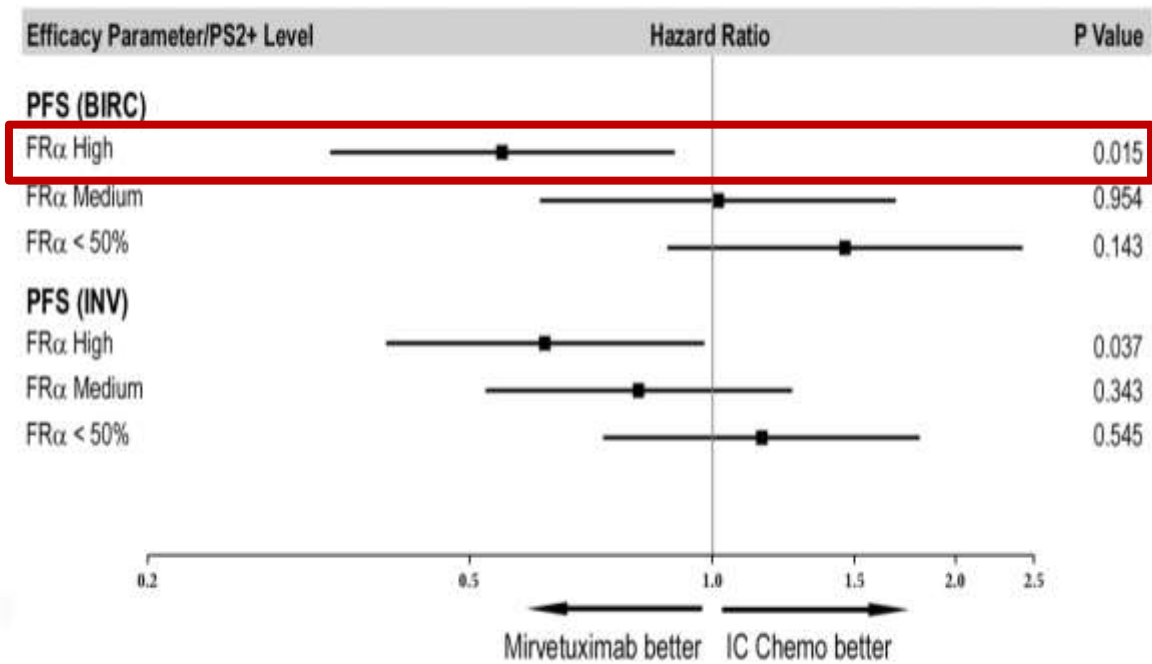
Moore, Ann Oncol 2021

Mirvetuximab Soravtansine: the importance of biomarker

Efficacy according the FR α scoring



PFS Hazard Ratio Plot



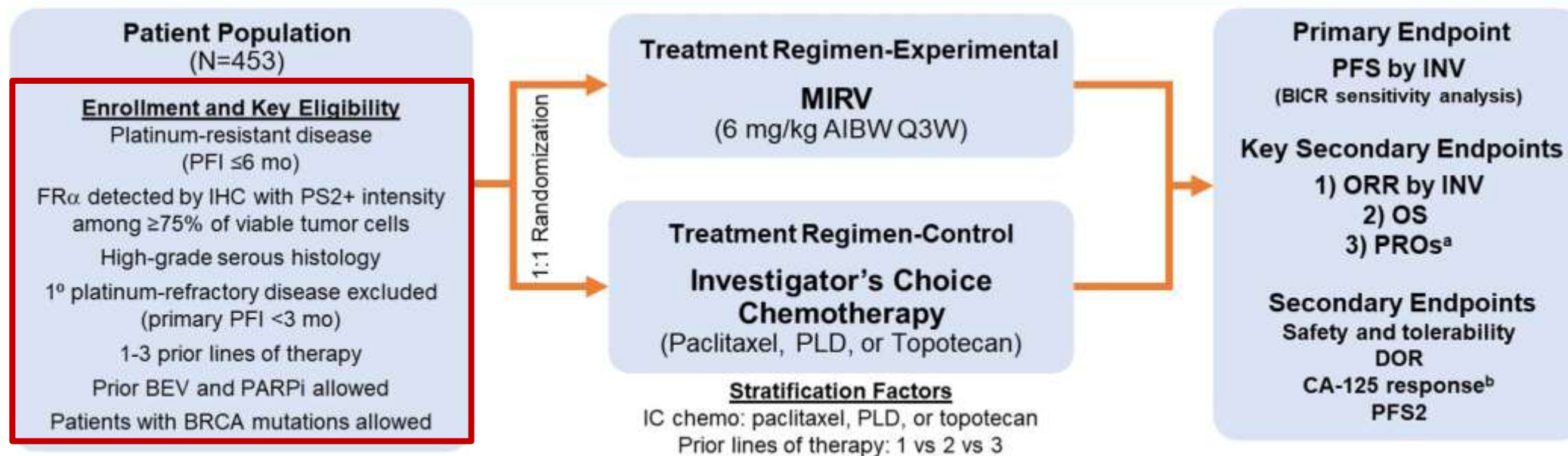
P values from unstratified log-rank test

Moore, Ann Oncol 2021

Mirvetuximab Soravtansine: MIRASOL trial

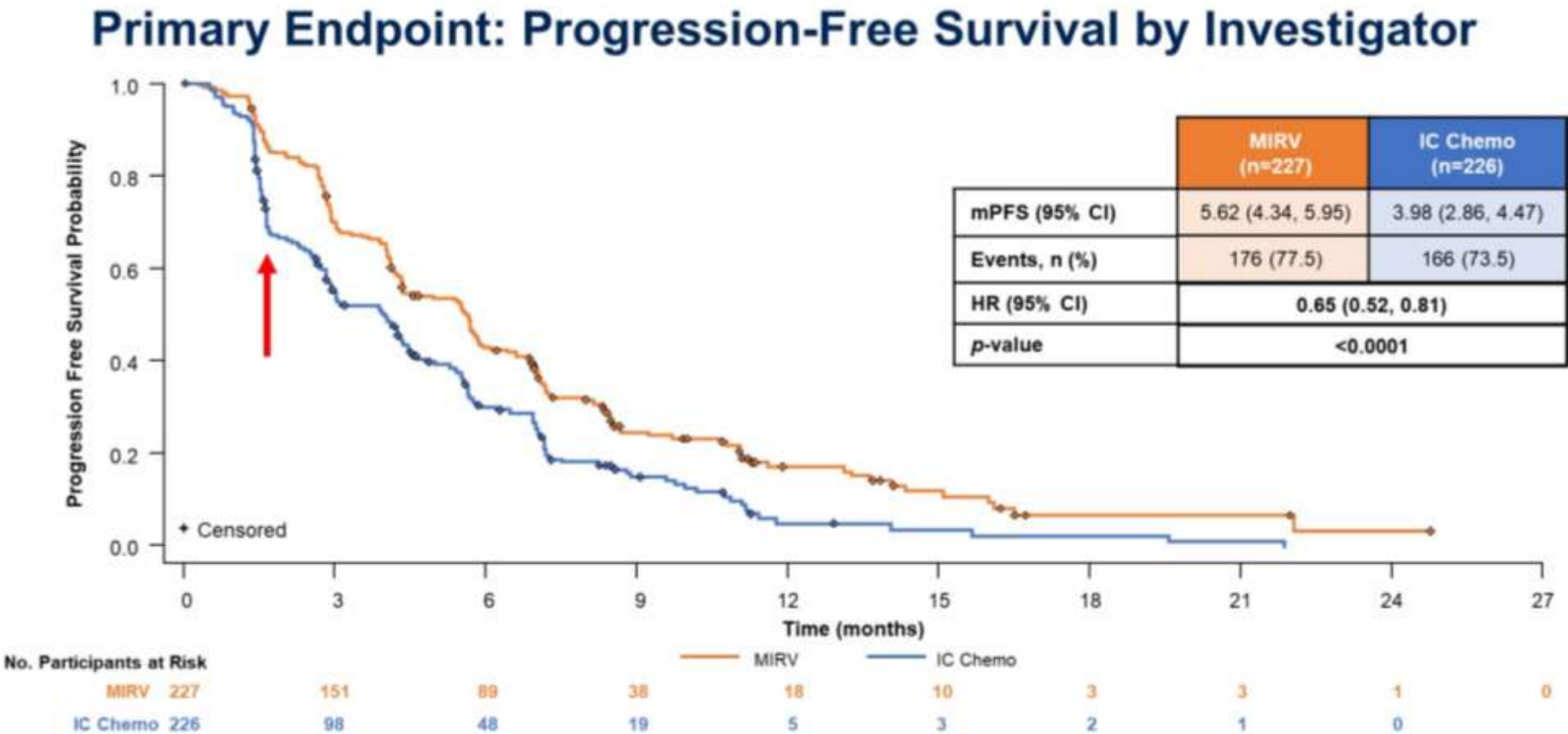
High FR α expression

An open-label, phase 3 randomized trial of MIRV vs investigator's choice chemotherapy in patients with FR α -high platinum-resistant ovarian cancer



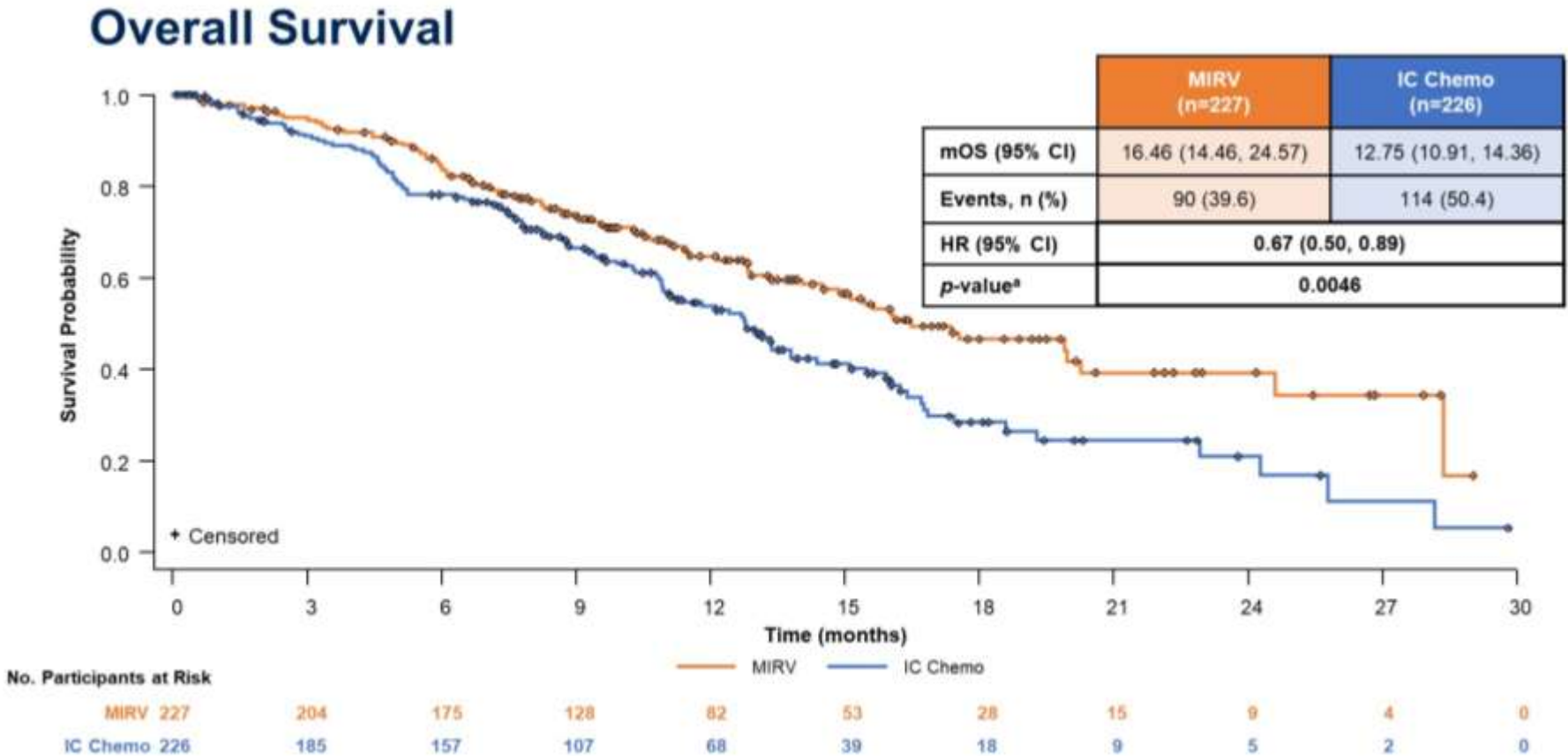
Moore, NEJM 2023

MIRASOL trial: Efficacy



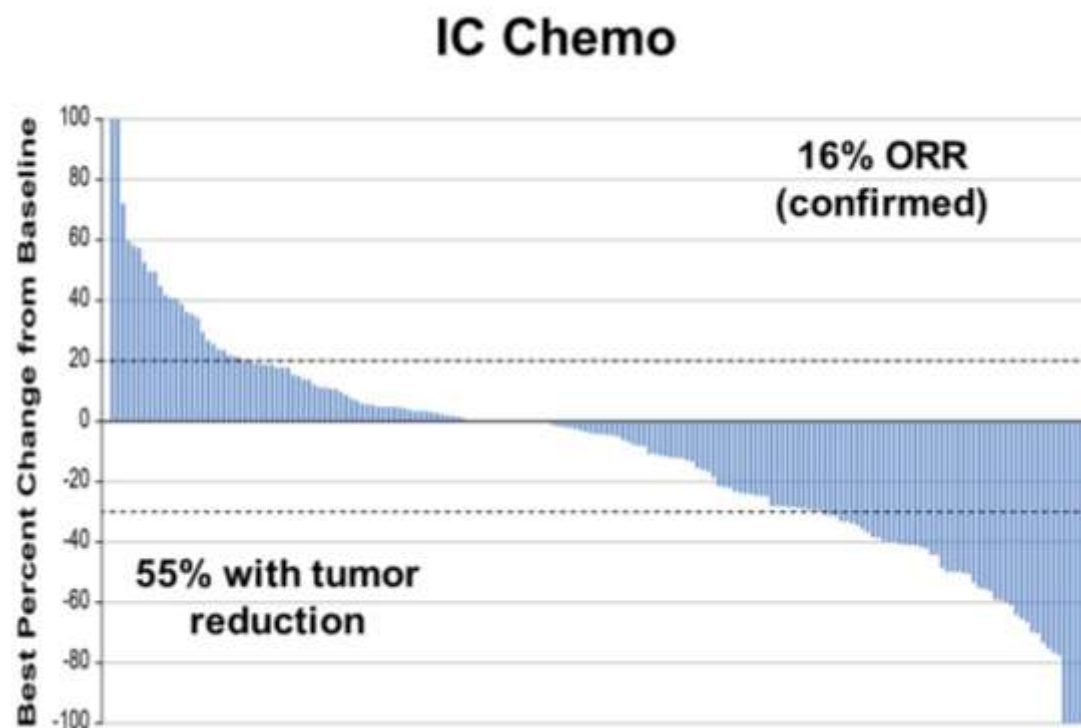
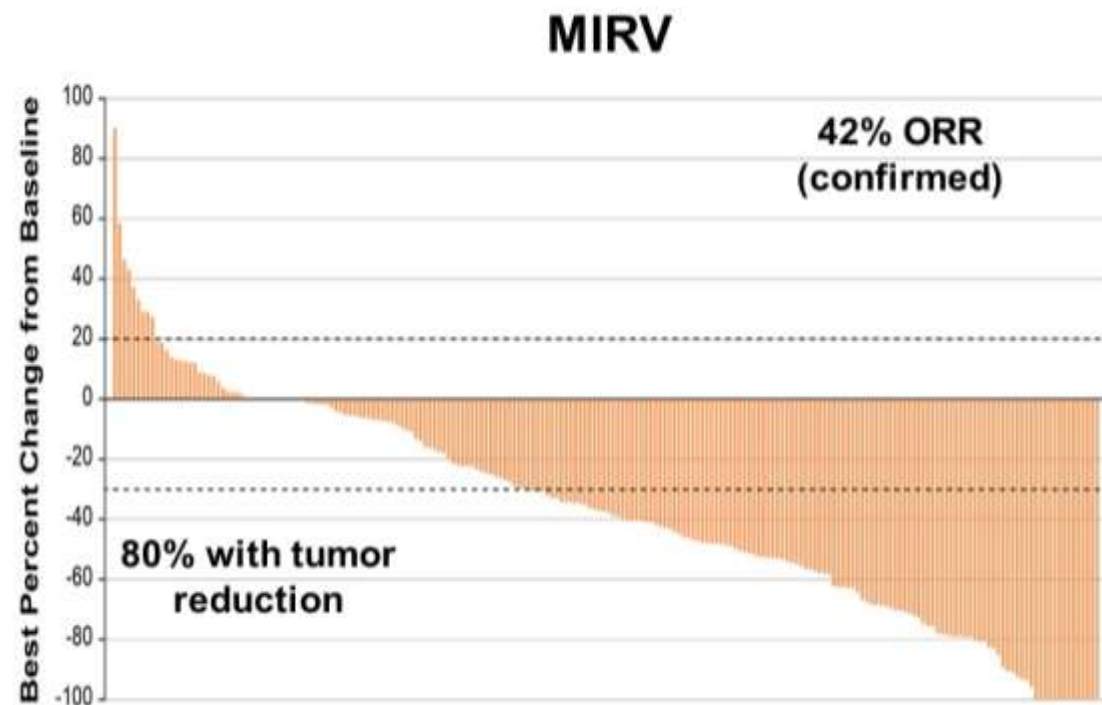
Moore, NEJM 2023

MIRASOL trial: Efficacy



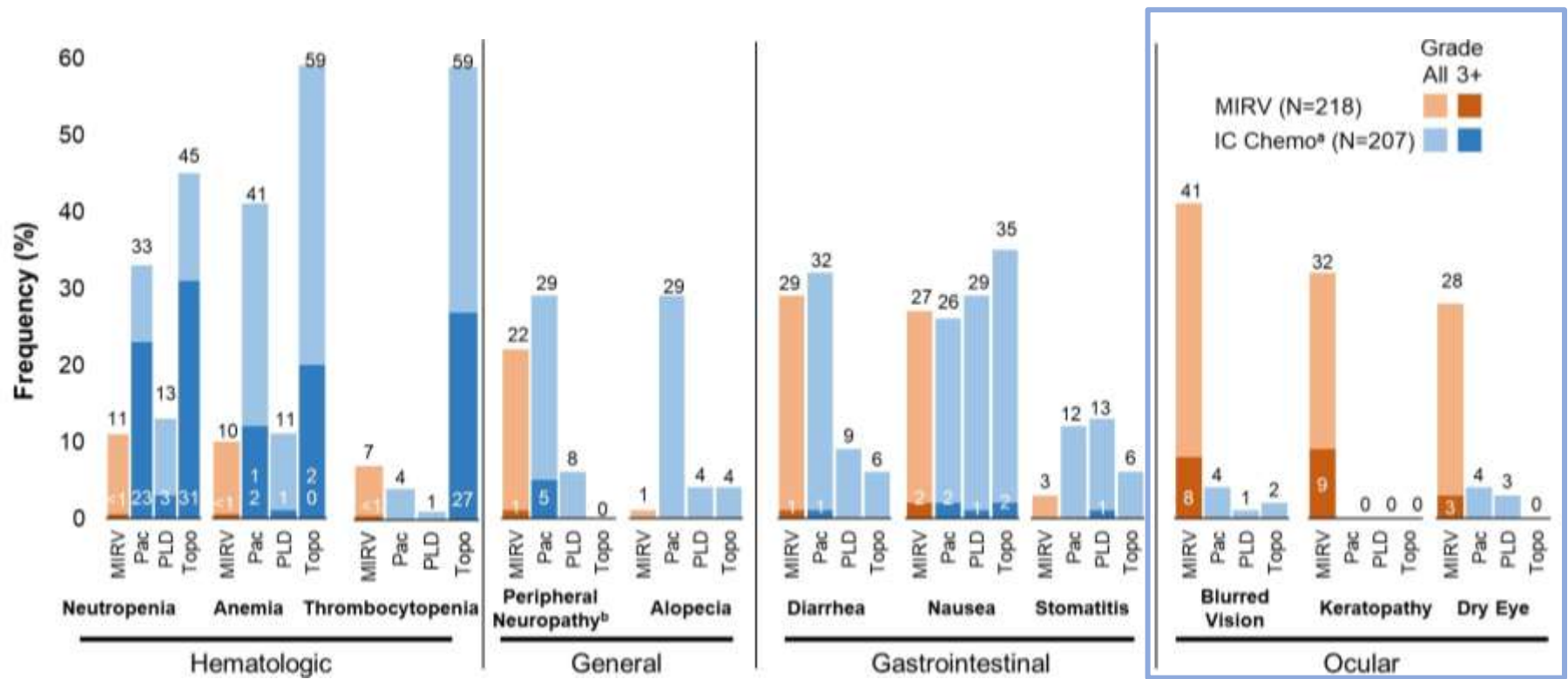
Moore, NEJM 2023

MIRASOL trial: Efficacy



Moore, NEJM 2023

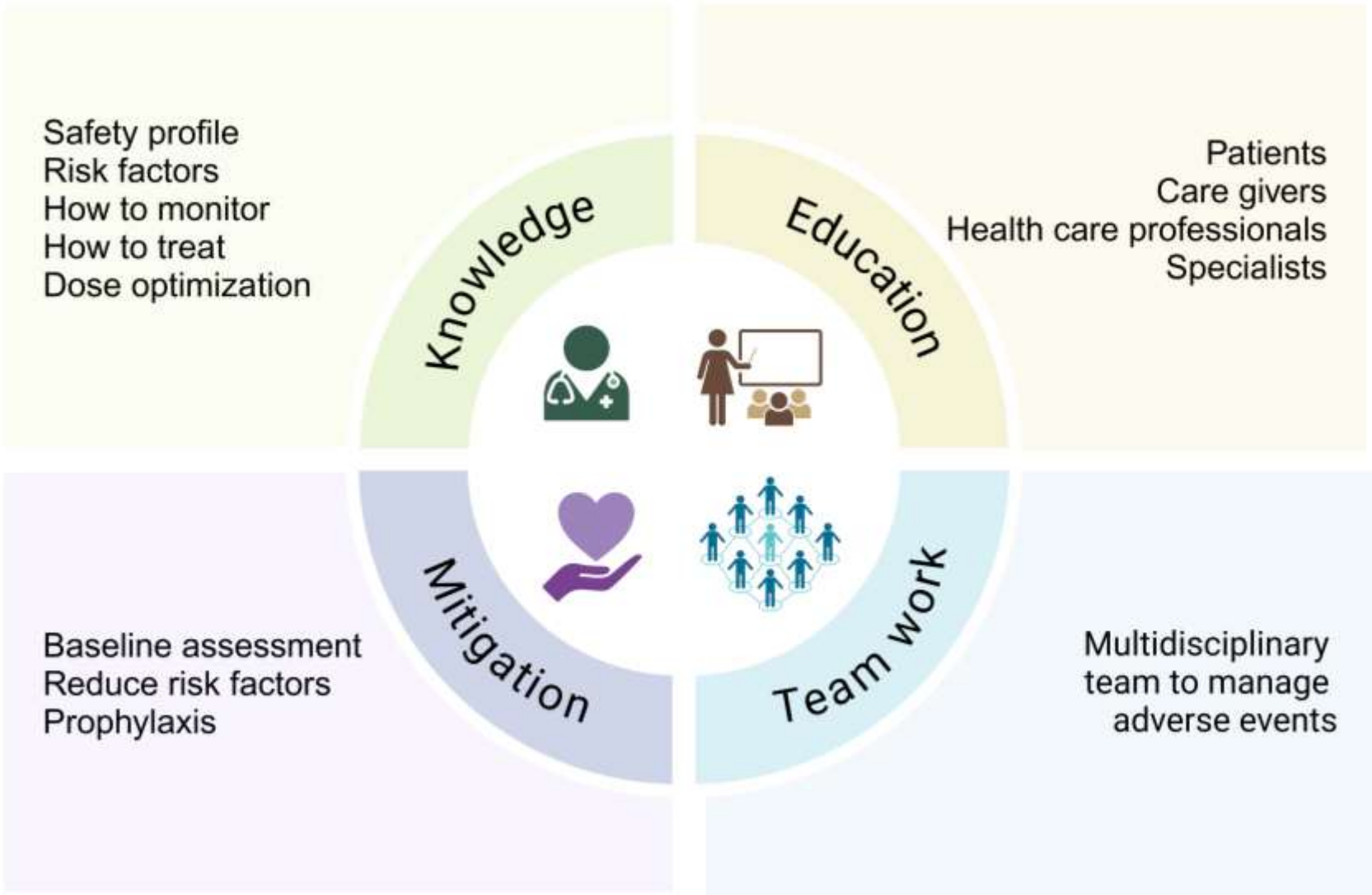
MIRASOL trial: Safety



- 56% **ocular AE**
- Majority **resolved to G≤1**
- **No G4**
- **Median time onset:** 5.4 weeks
- 4 pts (1.8%) **discontinue** due to ocular AE
- No corneal ulceration or perforations and no permanent alterations

Moore, NEJM 2023

How to manage safety?

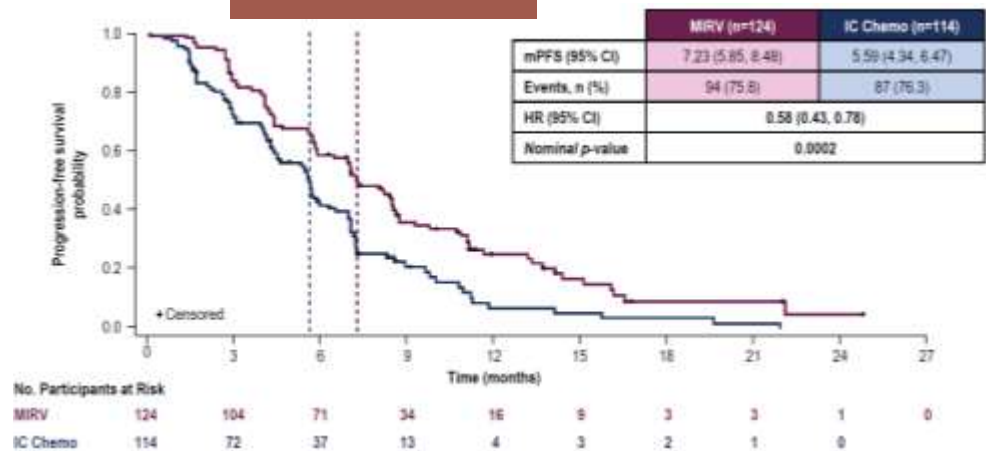


created with biorender

MIRASOL trial: Impact of dose reduction

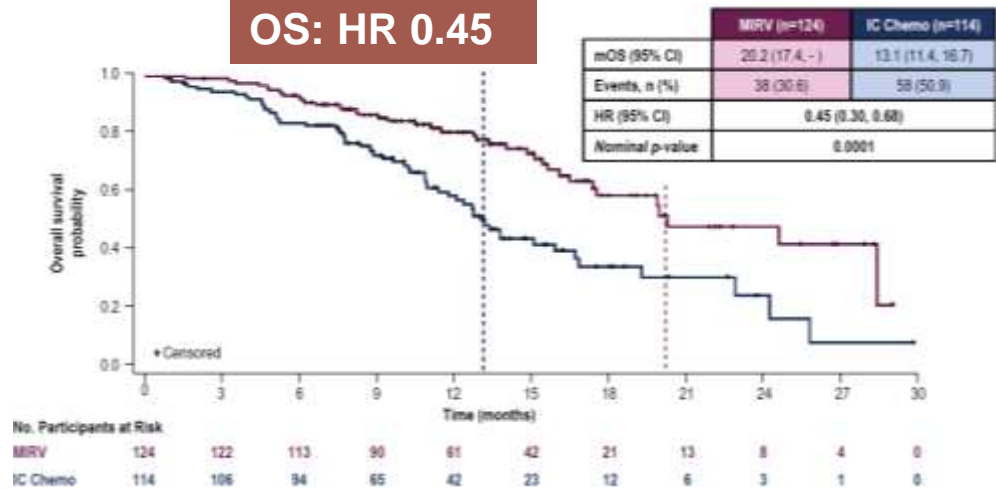
55% of patients in the MIRV arm 50% of patients in the IC chemo arm had dose modifications

PFS: HR 0.58



ITT: PFS HR 0.65
OS HR 0.67

OS: HR 0.45



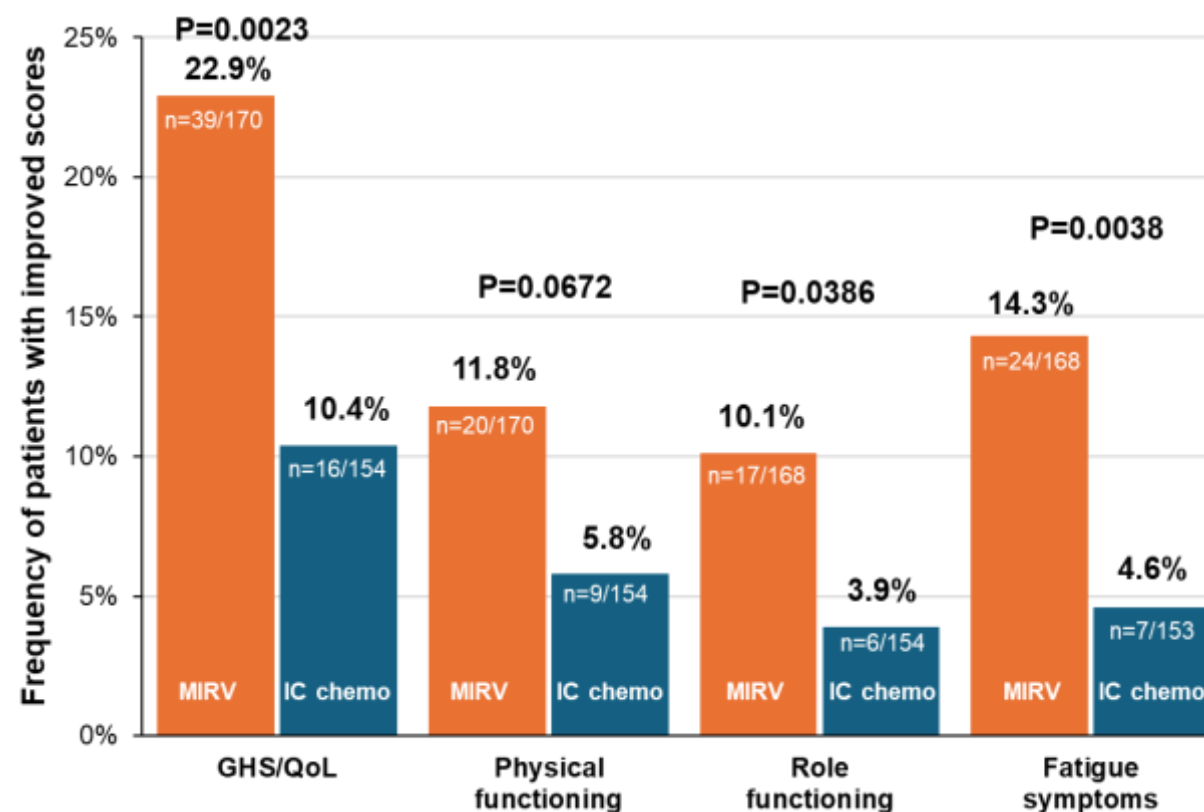
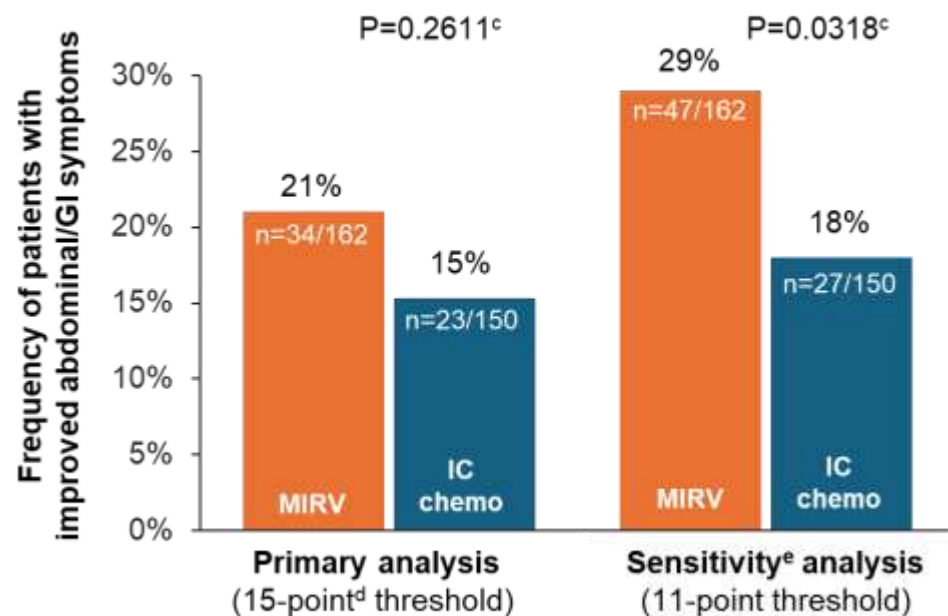
	MIRV (n=124)	IC Chemo (n=114)
ORR n, 95% CI	60% 74, (50.5, 68.4)	26% 30, (18.5, 35.4)
Best overall response, n (%)		
CR	10 (8.1)	0
PR	64 (51.6)	30 (26.3)
SD	44 (35.5)	61 (53.5)
PD	5 (4.0)	18 (15.8)
Not evaluable	1 (0.8)	5 (4.4)

IIT population: ORR 42%

Banerjee, ESMO Gyne 2024

MIRASOL – QOL

Responder^b analysis for OV28 abdominal/GI symptom subscale scores by treatment group at Week 8/9

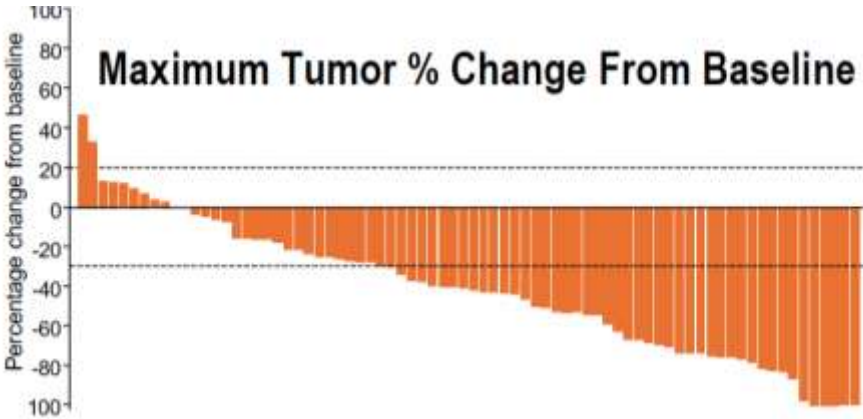


Konecny, SGO 2024; Garcia ESGO 2025

Mirvetuximab Soravtansine: The FUTURE

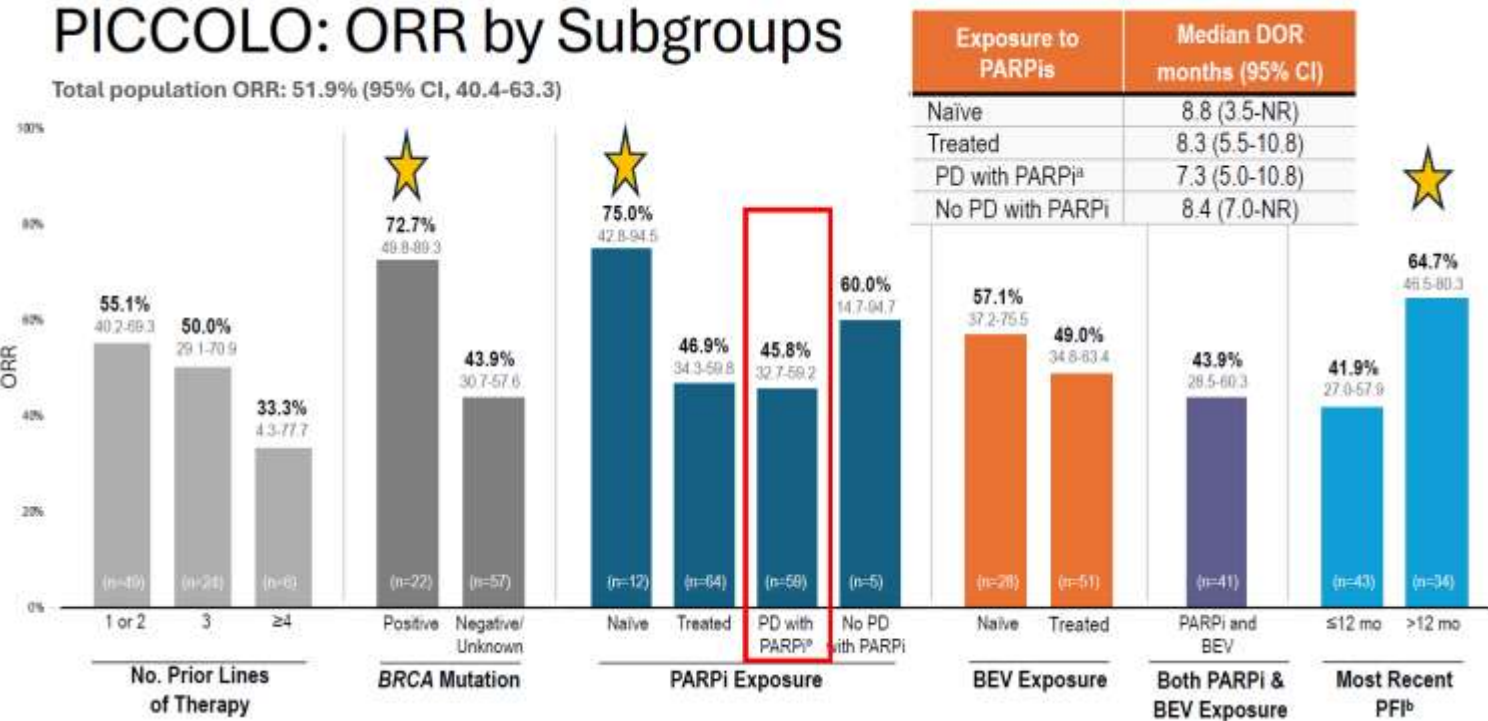
Can we move Mirve in earlier settings?

PICCOLO Trial in platinum-sensitive OC



Primary Endpoint	N=79
ORR, n (%)	41 (51.9)
95% CI	40.4-63.3
Best Response, n (%)	
CR	6 (7.6)
PR	35 (44.3)
SD	29 (36.7)
PD	7 (8.9)

Secondary Endpoints	
Median DOR ^a	n=41
Months (95% CI)	8.25 (5.6-10.8)
Median PFS	N=79
Months (95% CI)	6.93 (5.8-9.6)



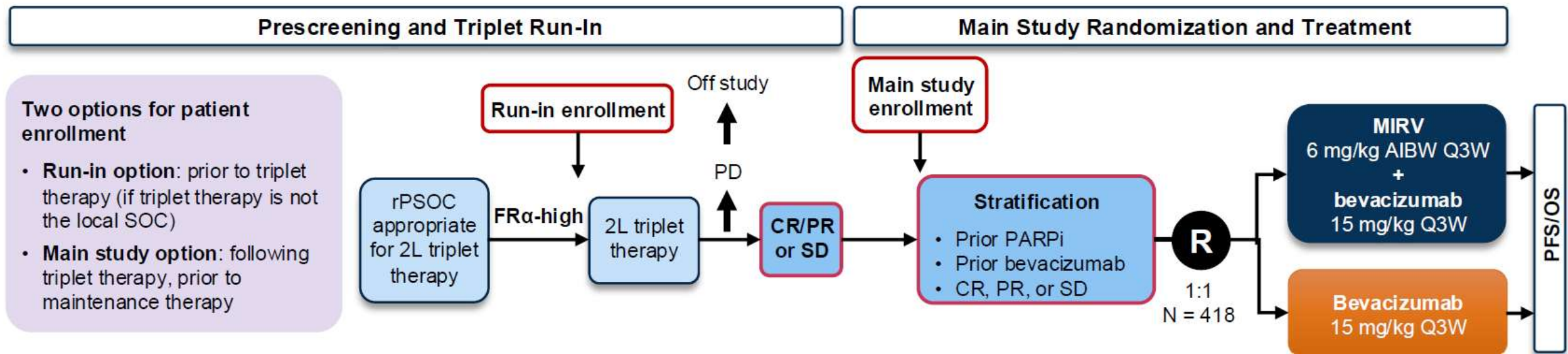
Alvarez Secord, Ann Oncol 2025

Mirvetuximab Soravtansine: The FUTURE

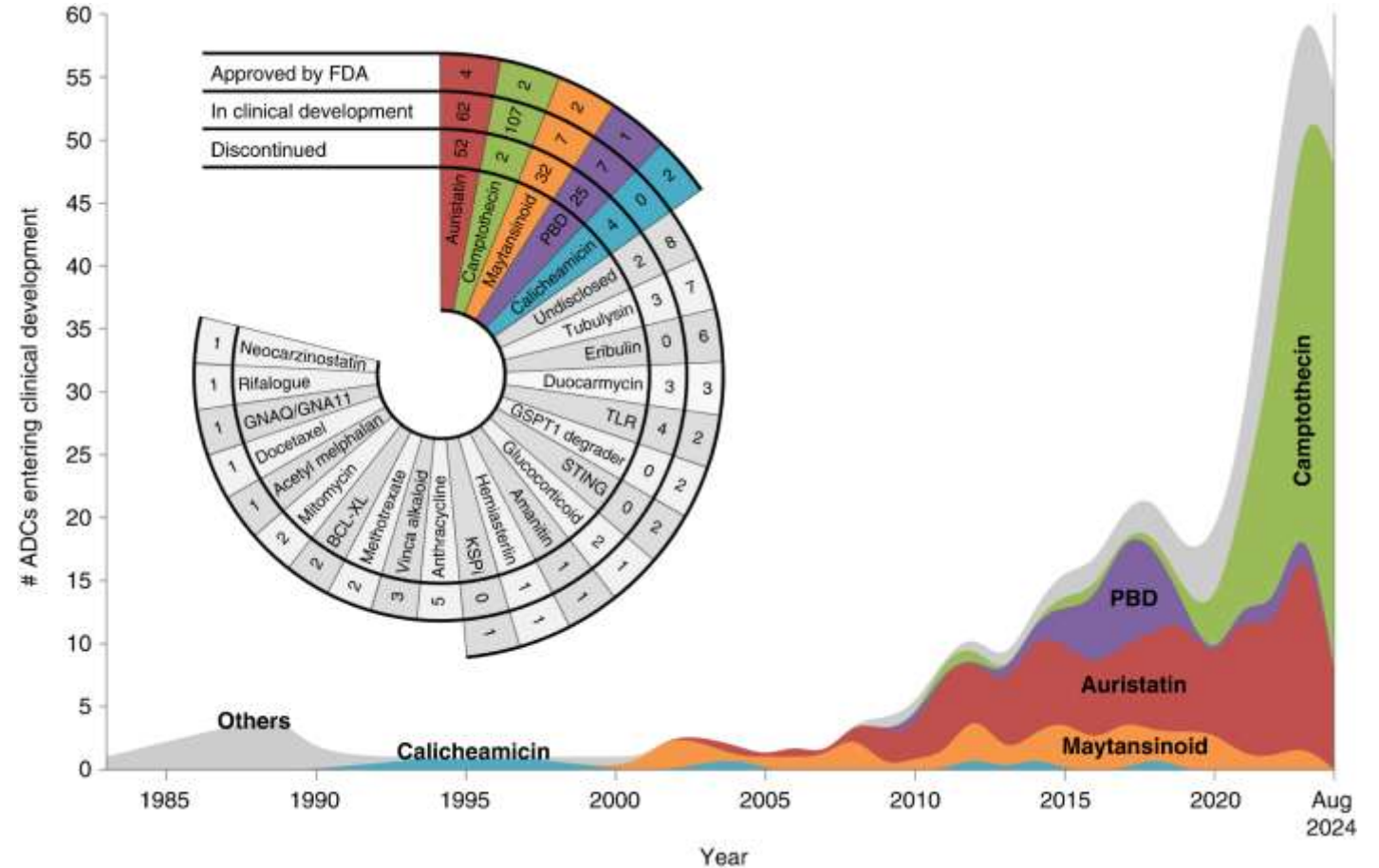
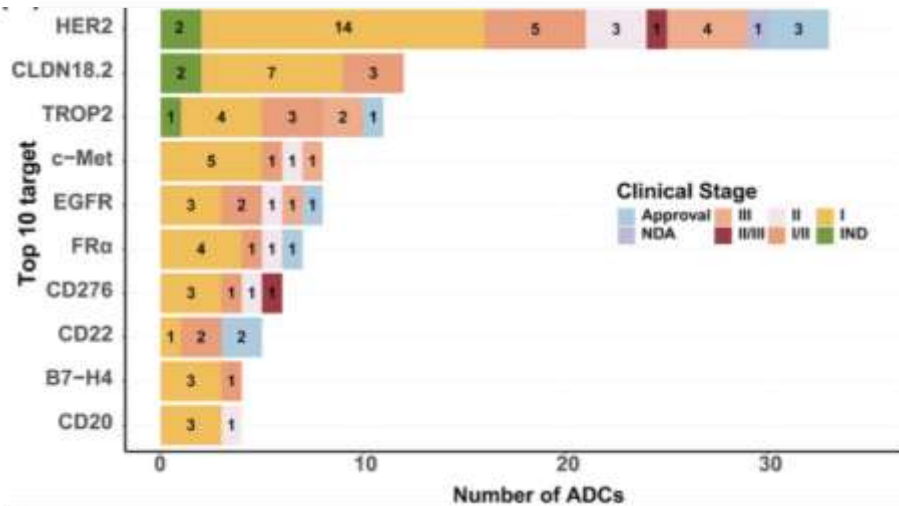
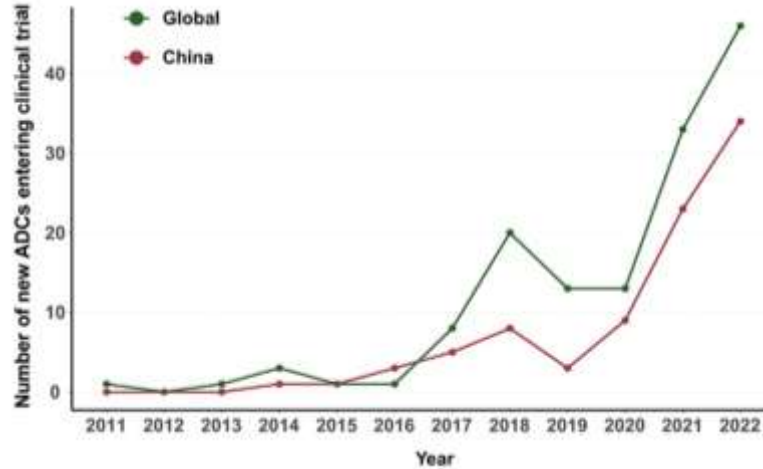
Can we use Mirve as maintenance strategy?
Can we combine Mirve with Bevacizumab?

GLORIOSA Trial in platinum-sensitive OC

Phase 3 GLORIOSA Study Design



The ADC revolution in oncology



Ruan, Cancer Communications 2023; Colombo R, Cancer Discovery 2024

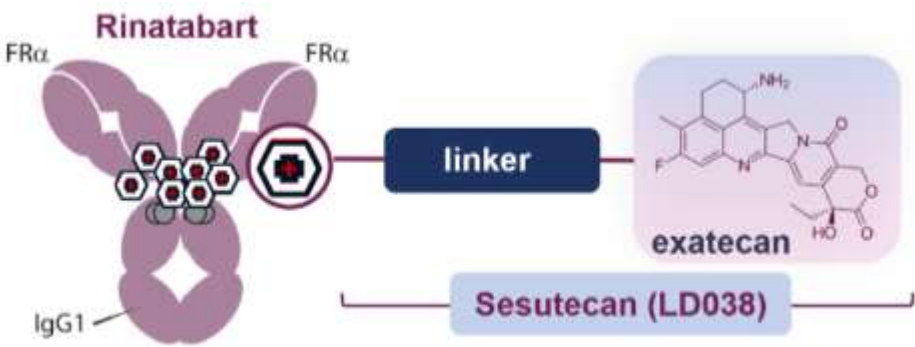
Targeting FRα: The FUTURE

Can we expand the indication for FRα targeting ADC using a different payload and regardless FRα expression?

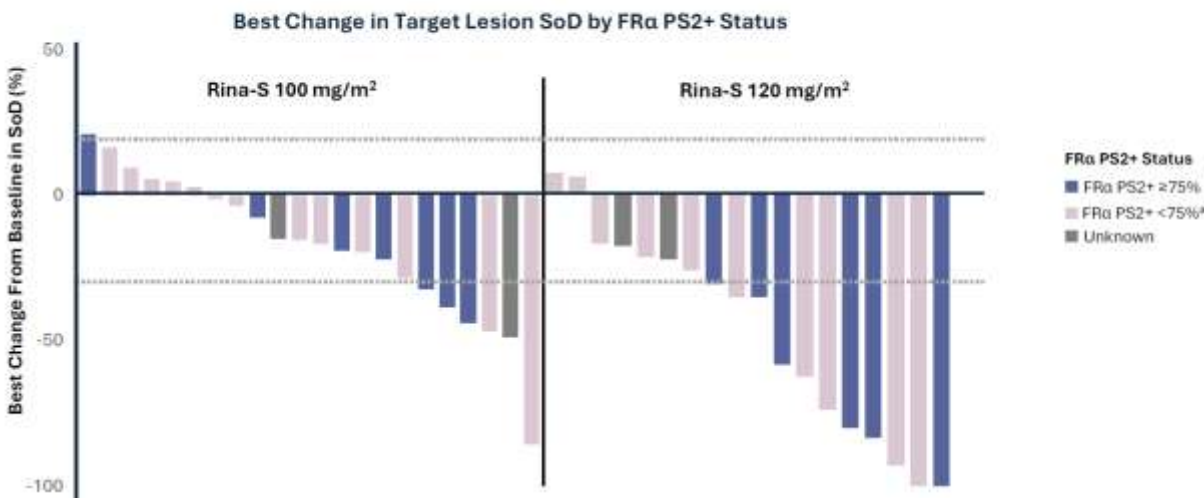
Rinatabart sesutecan (Rina-S) is an investigational, novel ADC composed of¹¹:

- A human monoclonal antibody directed at FRα
- A novel hydrophilic protease-cleavable linker
- Exatecan, a topoisomerase I inhibitor

Rina-S features a high, homogenous drug-to-antibody ratio of 8¹⁰



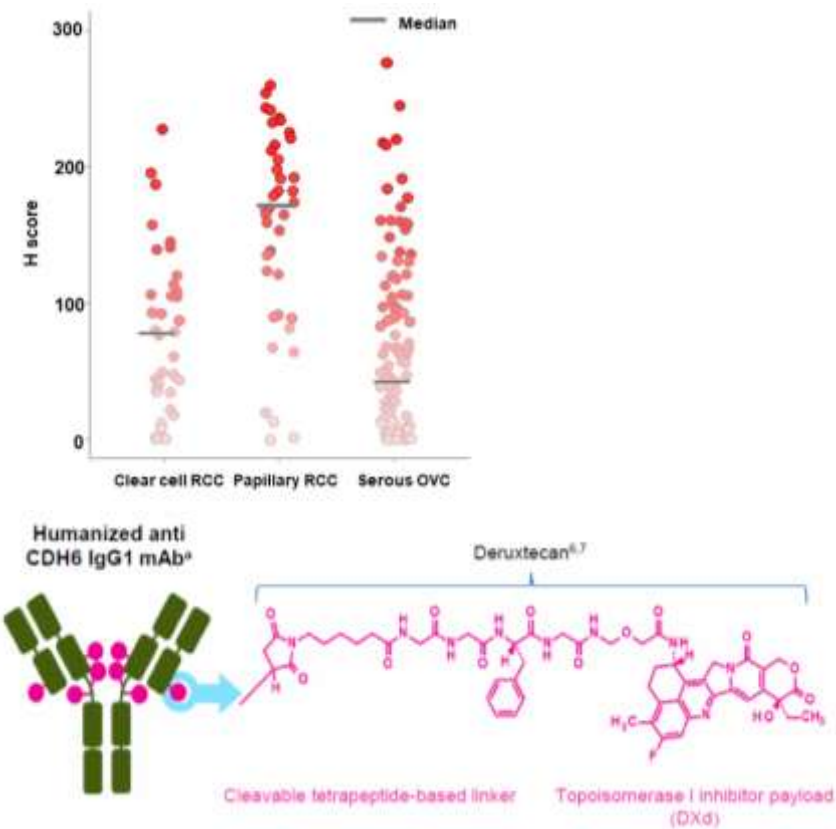
Response by FRα Expression



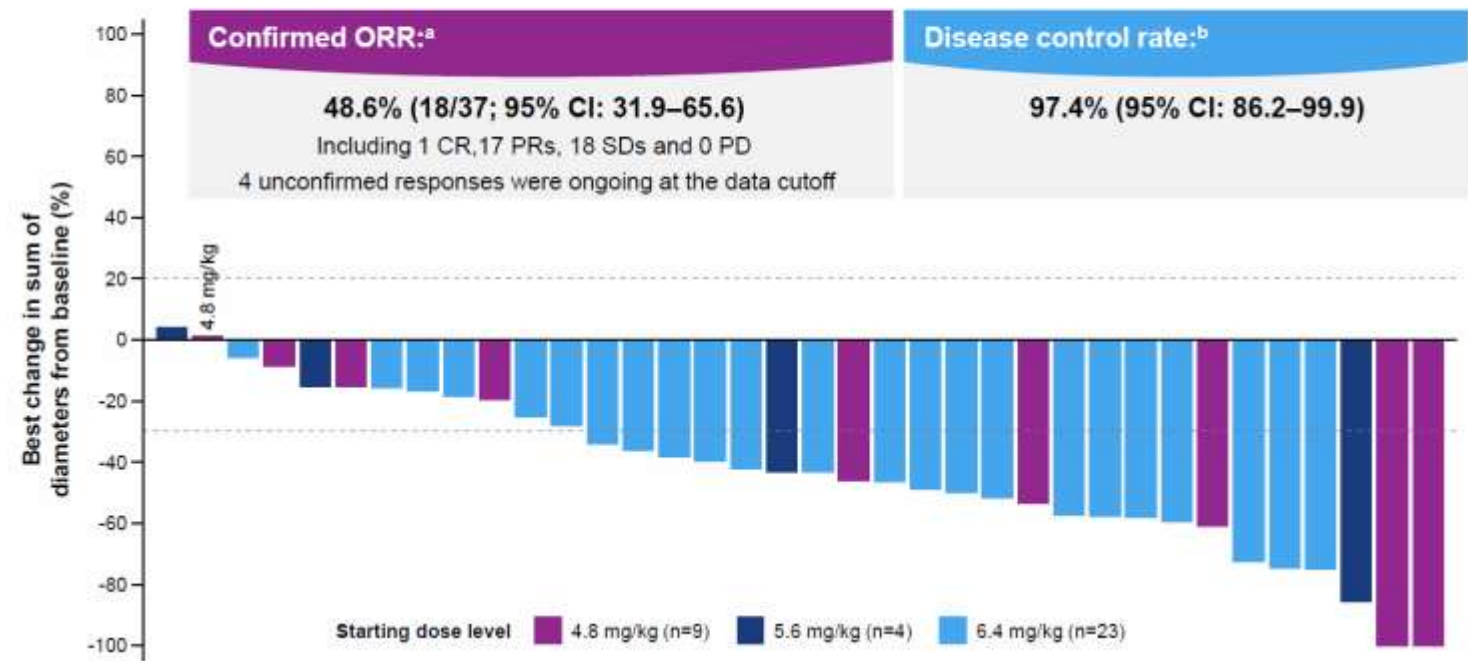
The FUTURE: which are other promising new targets and ADCs?

Cadherin 6

CDH6 Expression in RCC/Serous OVC



Preliminary antitumor activity of R-DXd is promising in heavily pretreated patients with OVC receiving doses of 4.8–6.4 mg/kg

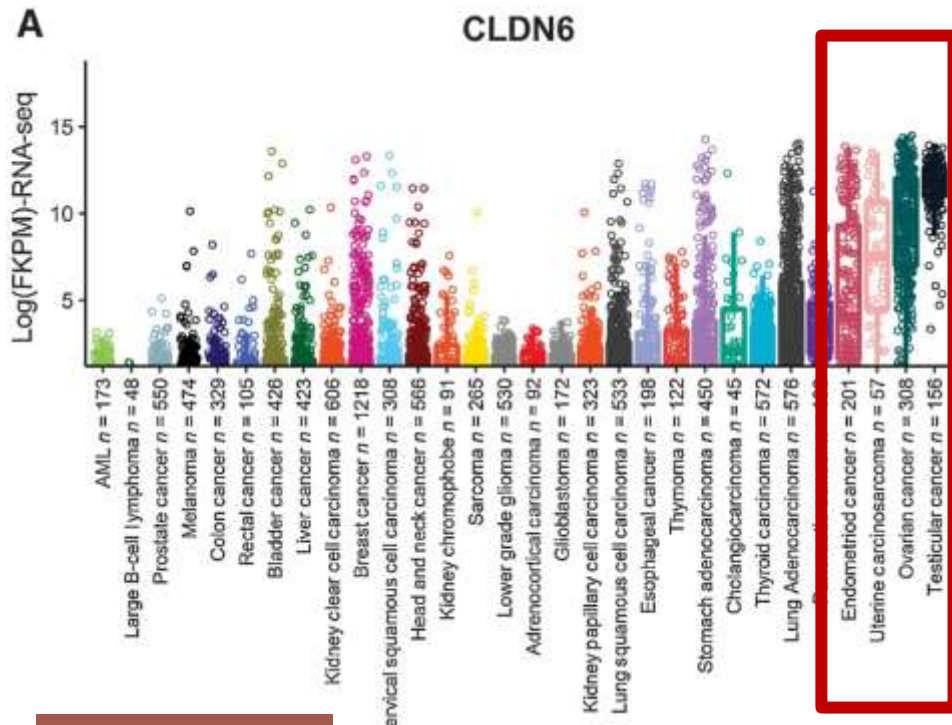


Raludotatug Deruxtecan (R-DXd)

Suzuki, Mol Cancer Ther 2024; Moore SGO 2025

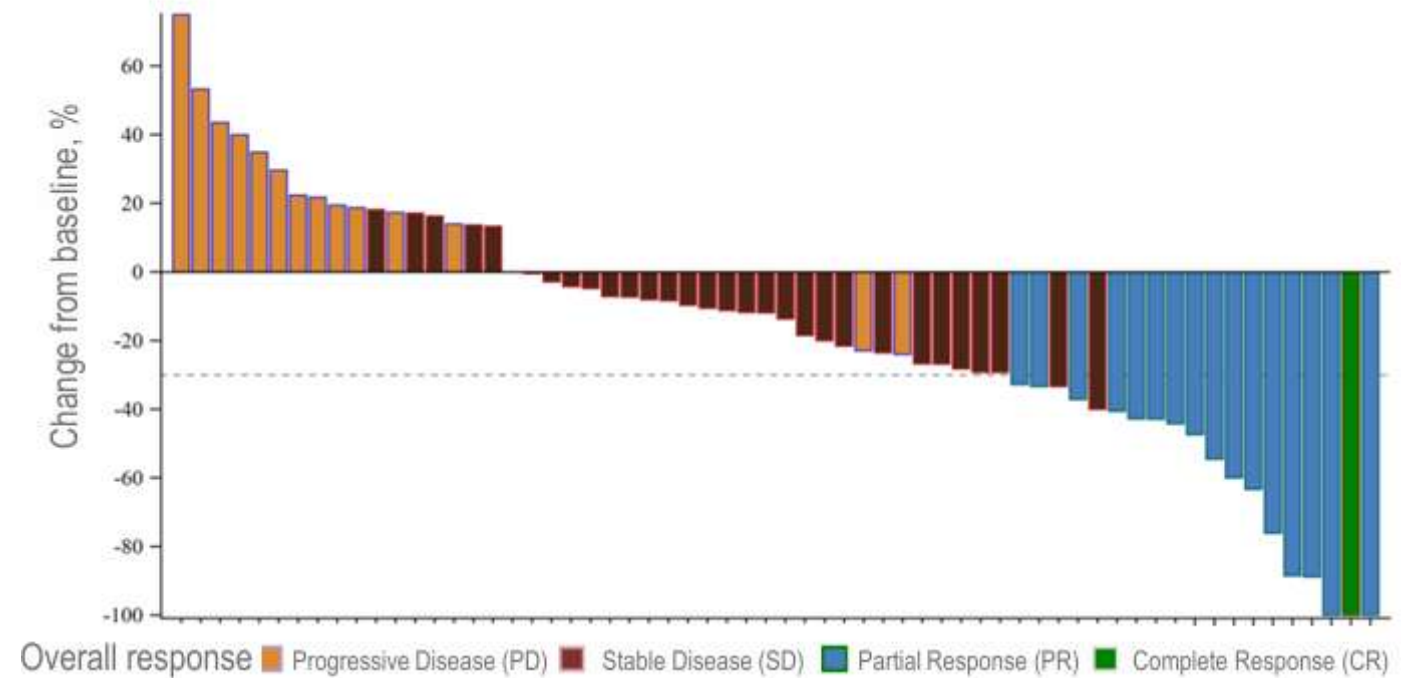
The FUTURE: which are other promising targets in OC?

Claudine 6



TORL-1-23

CLDN6 targeting ADC with a vc-MMAE linker-payload and a DAR ~4



Activity in CLDN6+ PROC

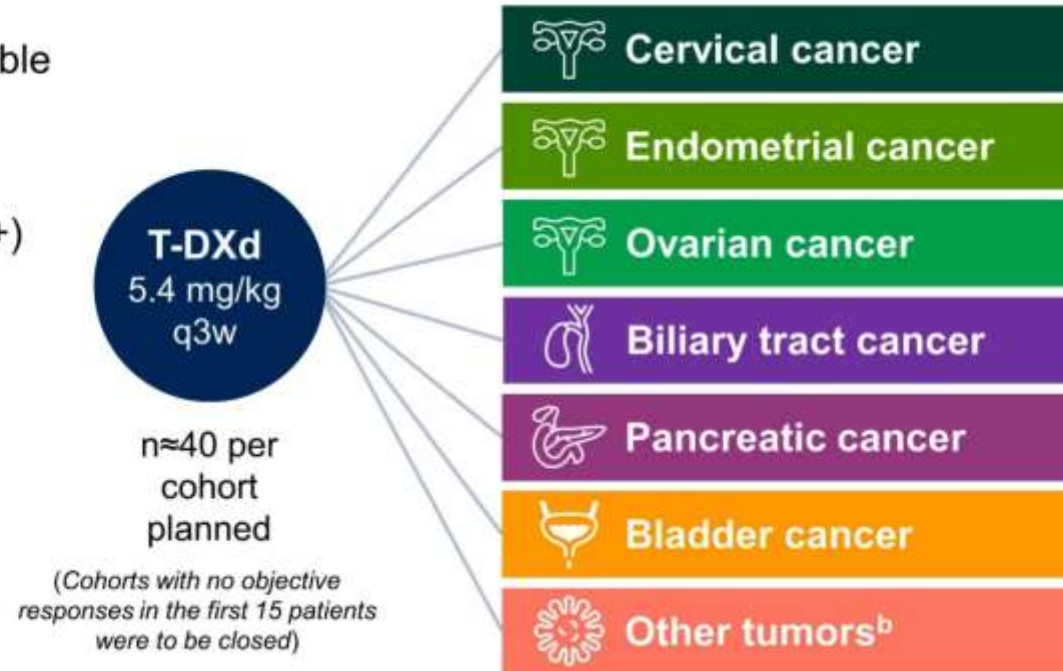
- ORR, 50% (4/8) at the 2.4 mg/kg dose
- ORR, 42% (5/12) at the 3.0 mg/kg dose

McDermott CCR 2023; Konecny, ESMO 2024

Targeting HER2

DESTINY-PanTumor02 study

- Advanced solid tumors not eligible for curative therapy
- 2L+ patient population
- HER2 expression (IHC 3+ or 2+)
 - Local test or central test by HercepTest if local test not feasible (ASCO/CAP gastric cancer guidelines¹)^a
- Prior HER2-targeting therapy allowed
- ECOG/WHO PS 0–1



Primary endpoint

- Confirmed ORR (investigator)^c

Secondary endpoints

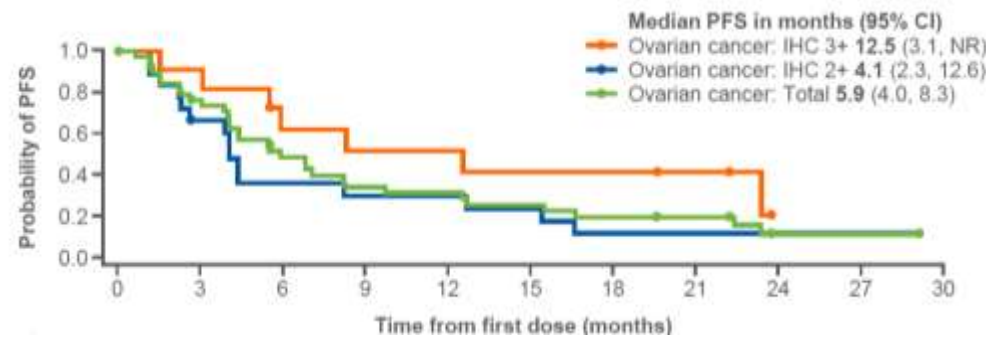
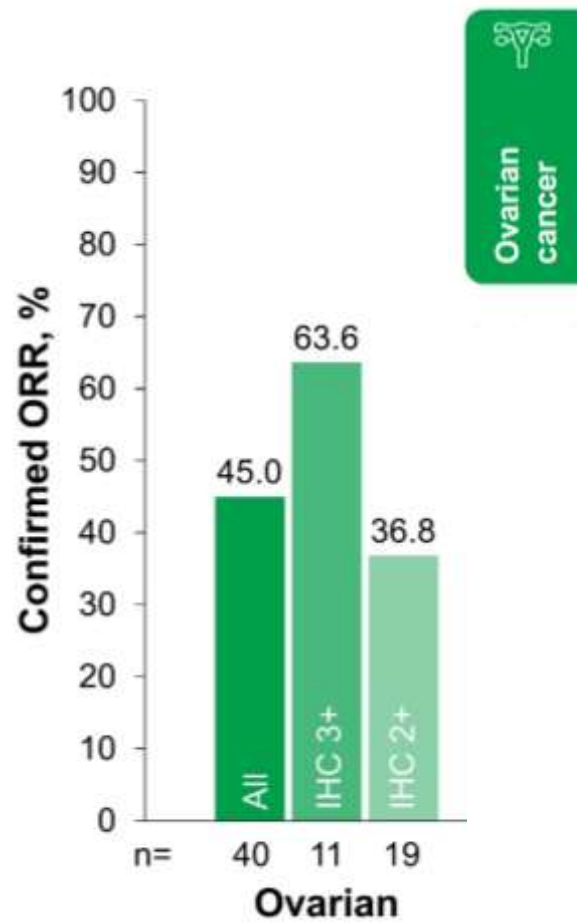
- DOR^c
- DCR^c
- PFS^c
- OS
- Safety

Data cut-off for analysis:

- Nov 16, 2022

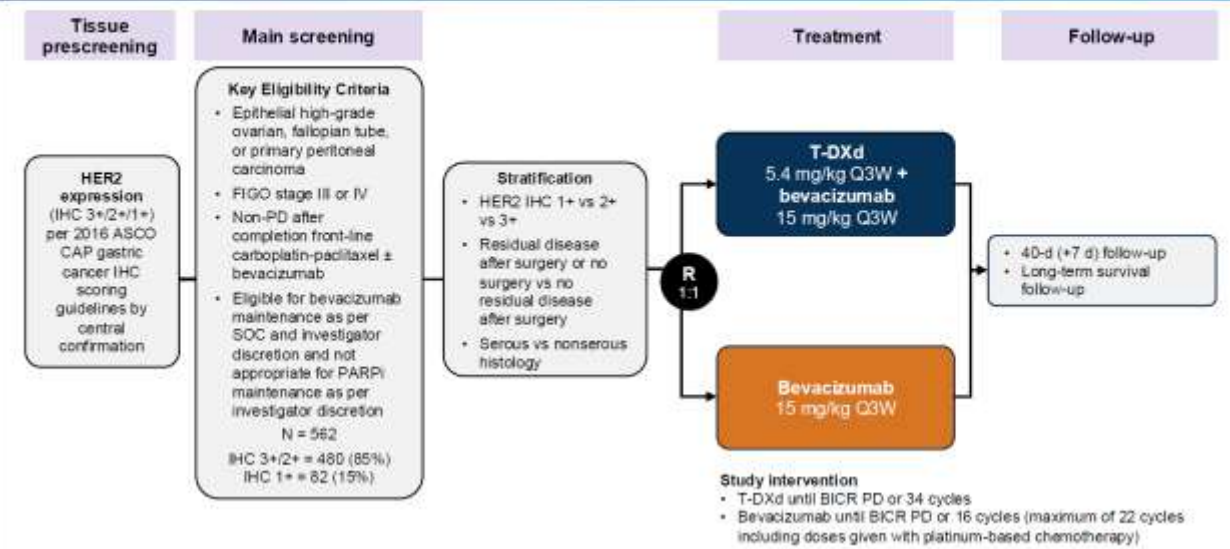
Meric-Bernstam, JCO 2024

Targeting HER2: THE PRESENT



Confirmatory Phase 3 trials in OC

Phase 3 DESTINY-Ovarian01: T-DXd + Bevacizumab as 1L Maintenance Therapy in HER2-Expressing Ovarian Cancer¹



Meric-Bernstam, JCO 2024

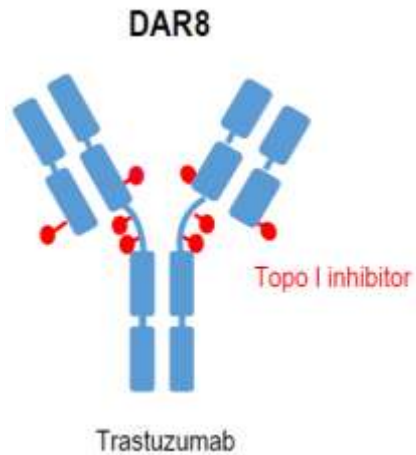
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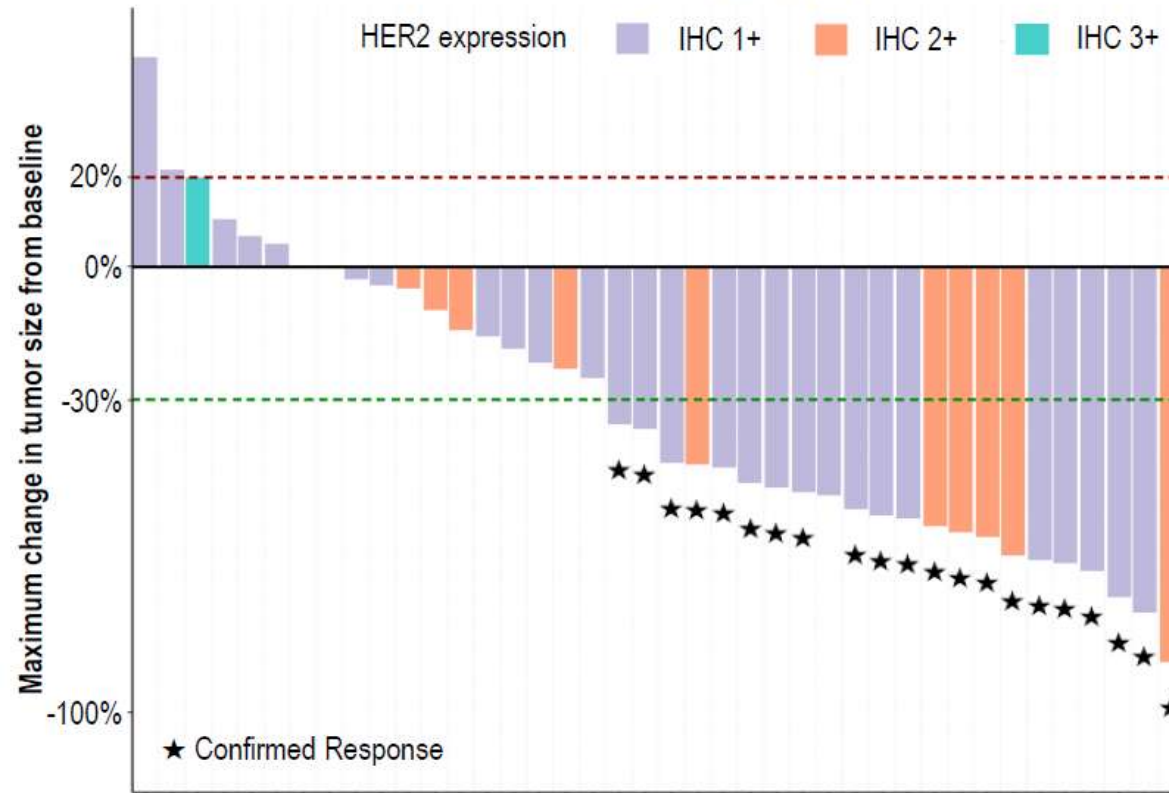


Targeting HER2: new ADC on the horizons

IBI354



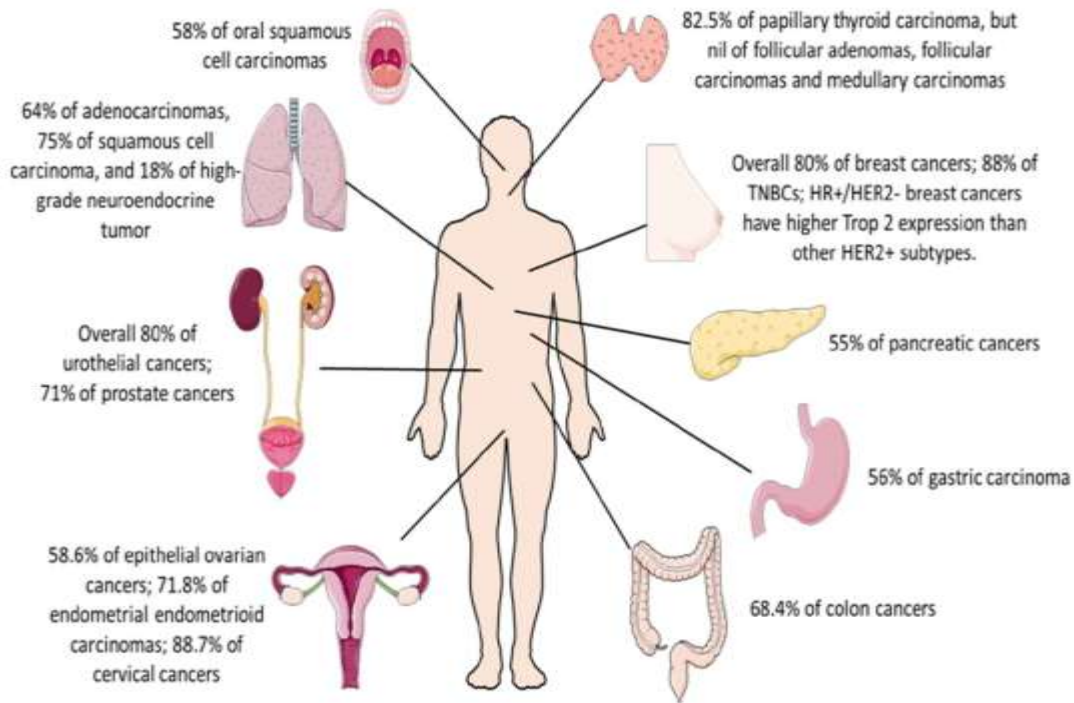
Patients with OC at 12 mg/kg Q3W dose



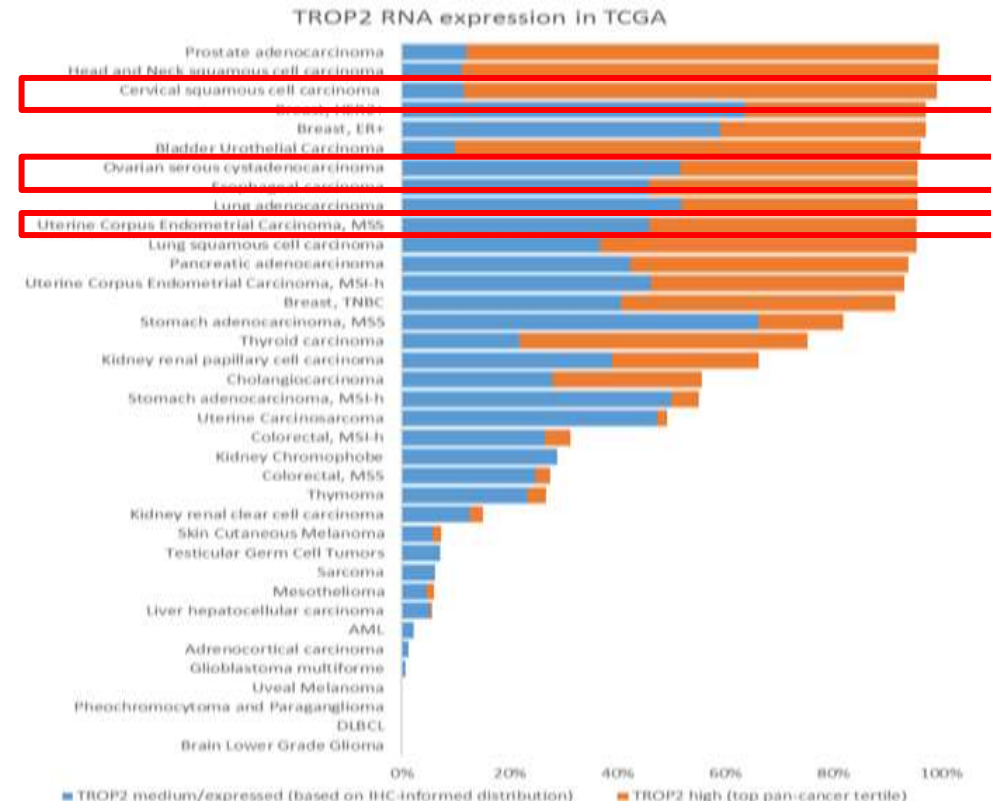
Shu, ESMO 2024

Targeting TROP2 across Gyne Cancers

Trophoblast cell surface antigen 2 (TROP2) is a transmembrane calcium signal transducer promoting tumor proliferation by regulating the calcium ion signaling pathway and cyclin expression and reducing fibronectin adhesion



TROP-2 is Highly Expressed in GYN cancers



Wen Y et al. Ann Transl Med. 2022; Cheng Y, et al. Front. Oncol. 2022; . Liao, S et al. Preprints. 2020,

ADC Targeting TROP2 in Ovarian Cancer

	Sacituzumab tirumotecan (MK-2870) 5mg/kg D1, D15 N=35 (PROC)	Datopotamab deruxtecan N=26 (PROC)	SHR A1921 Q 21 day dosing 3.0mg/kg (N=26) Day 1, 8 2.0mg/kg (N=20)
Payload	Belotecan derivative Topoisomerase I	Topoisomerase 1- deruxtecan	Topoisomerase 1 (proprietary SHR9265)
DAR	7.4	4	4

**Which is the role of biomarker expression?
Does it matter?**

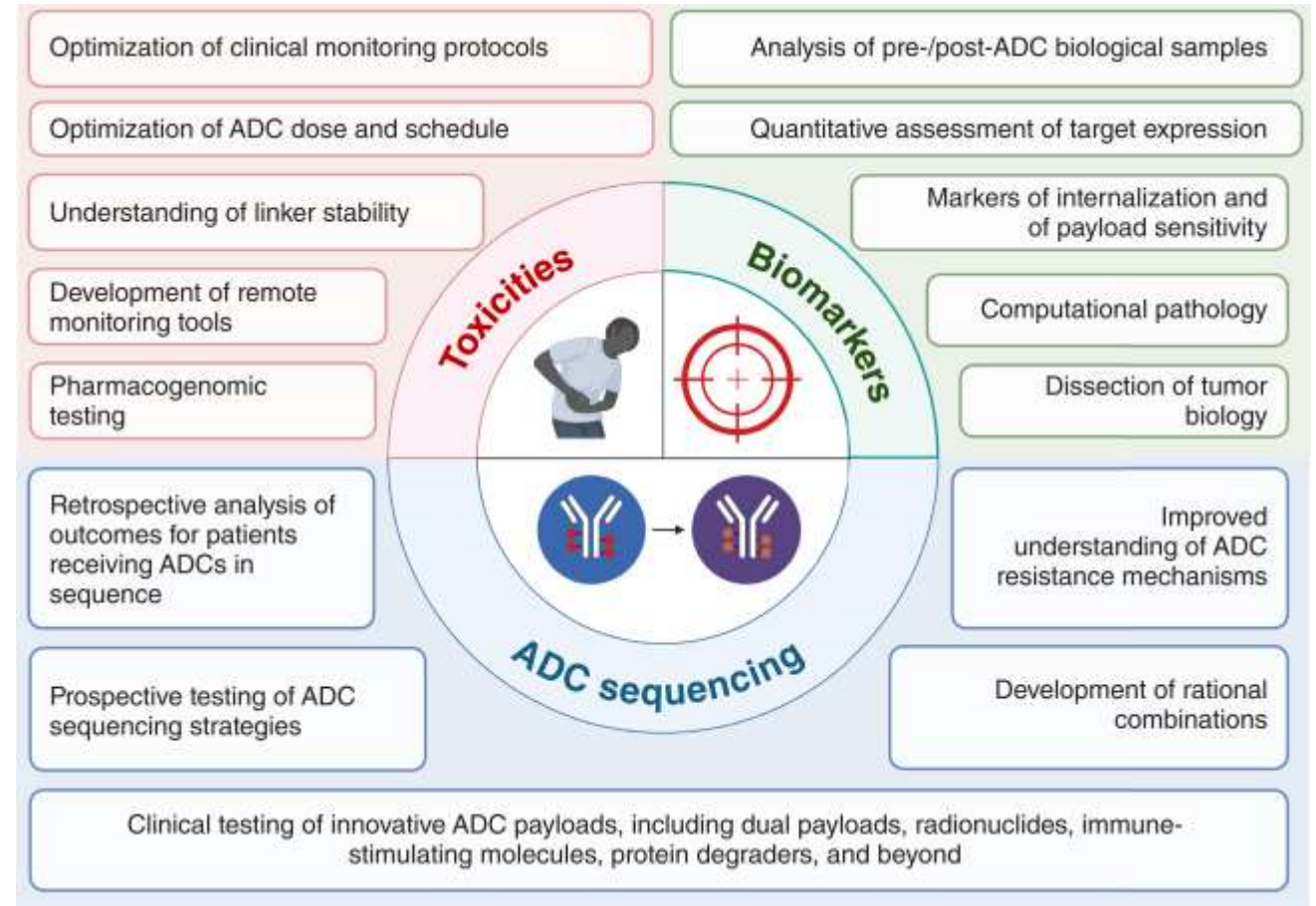
Prior Bev	NR	71.4%	76% 60.0%
ORR (PROC)	37.1% (PROC)	34.6% (95% CI 17.2- 55.7)	42.3% (95% CI 23.4-63.1) 58.8% (95% CI 32.9-81.6)
DOR (PROC)	5.3 months (2.1, 24.4+)	5.6 months (2.9-NC)	9.9 months (4.5-NC) 6.3 months (3.0-NC)
mPFS	6.0 months (95% CI 3.9-7.3) (inclusive of PSOC)	5.6 months (inclusive of PSOC)	7.9 (4.2-NR) 6.9 (4.2- 9.6)

Open questions and challenges

Dose optimization
Treatment duration
Sequence
Safety
QoL
Biomarkers
Setting
Resistance Mechanisms



**How to choose among many ADCs?
Which will be the best SoC arm in trials?**



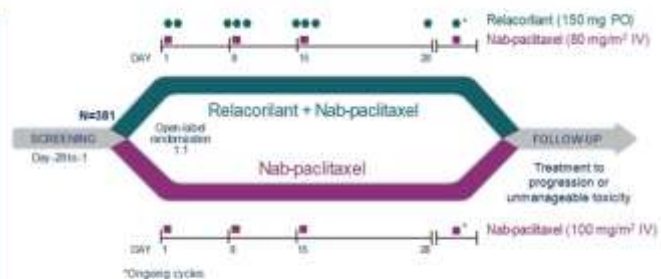
Colombo R, Cancer Discovery 2024

What else is coming beyond ADC?

ROSSELLA: Relacorilant

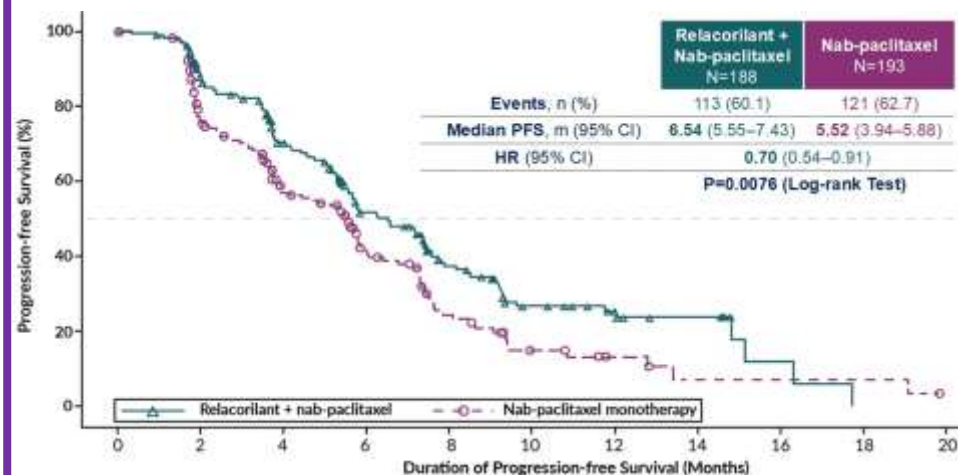
Population

- Epithelial ovarian, primary peritoneal or fallopian tube cancer
- ECOG performance status 0 or 1
- Progression <6 months after the last dose of platinum therapy (excluding no response to, or progression in <1 month of primary platinum)
- 1–3 prior lines of therapy
- Prior bevacizumab required



Stratification Factors

- Prior lines of therapy (1 vs >1)
- Region (North America vs Europe vs Korea, Australia, & Latin America)



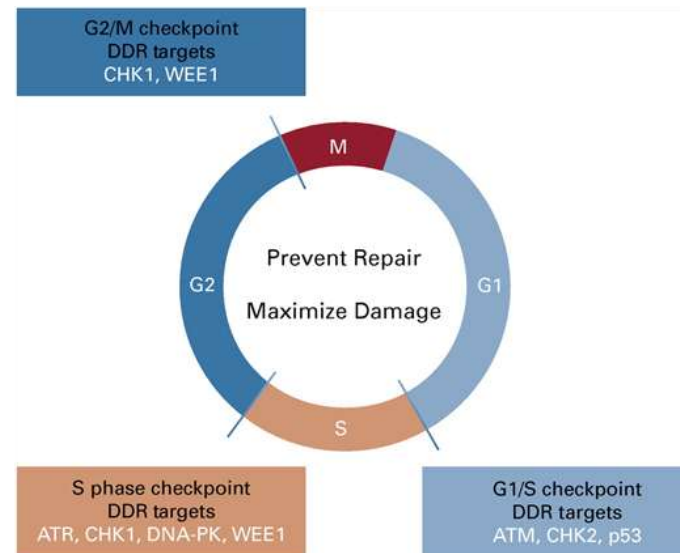
Olawaiye, ASCO 2025

KEYNOTE B96

PRESS RELEASE

Phase 3 KEYNOTE-B96 trial, also known as ENGOT-ov65, met its primary endpoint of progression-free survival (PFS) for the treatment of patients with platinum-resistant recurrent ovarian cancer whose tumors expressed PD-L1 and in all comers. The study also met a secondary endpoint of overall survival (OS) in patients whose tumors express PD-L1

Cell-cycle check points



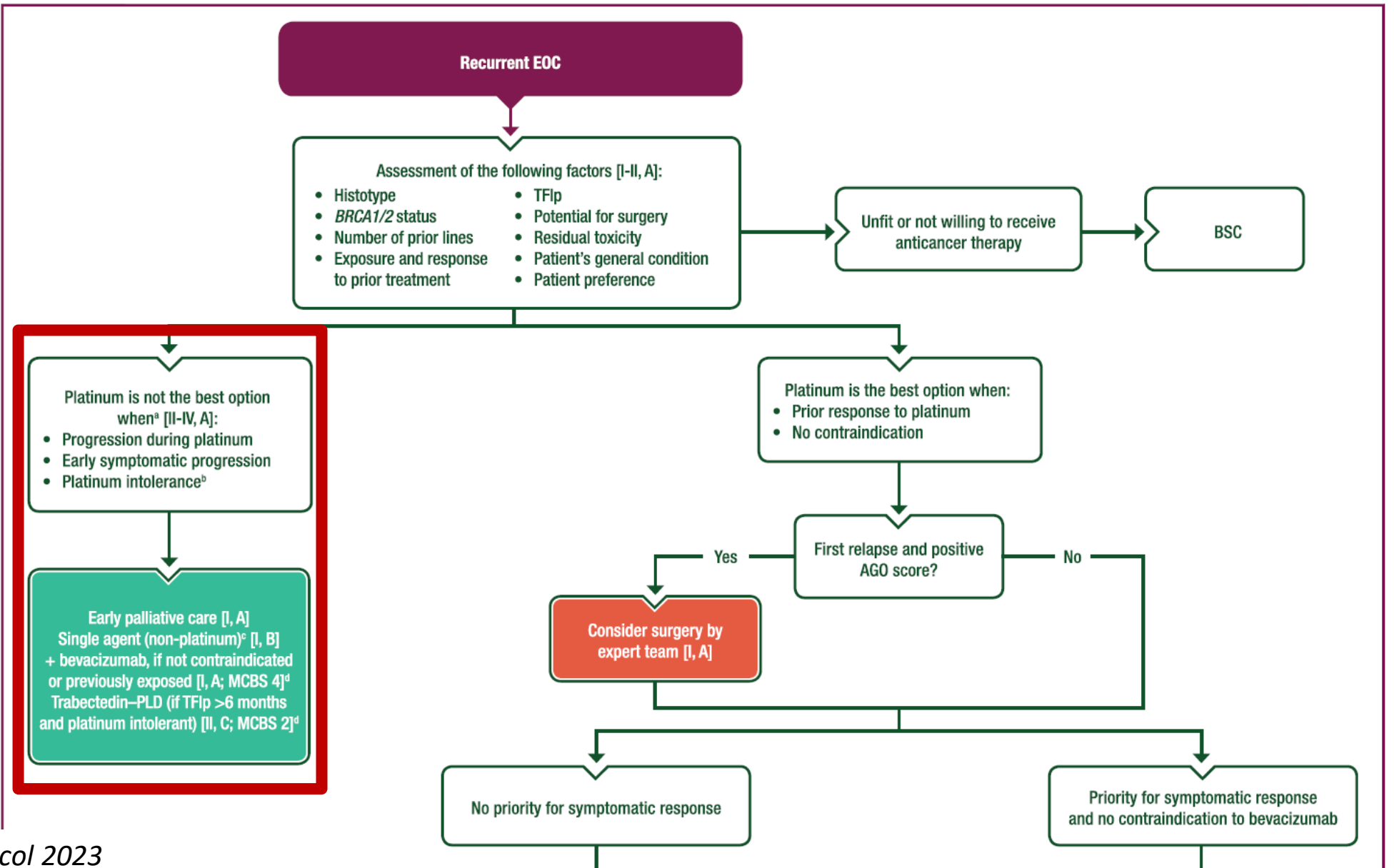
ATRi
ATMi
WEE1i
CDK2i

Gourley, JCO 2019

Guidelines



**Mirvetuximab
for
FR high tumors**



Gonzalez-Martin, Ann Oncol 2023

Take home message

- **Platinum resistant ovarian** cancer is still characterized by **poor prognosis** and few effective agents are available
- In patients with **high FR α expression**, **Mirvetuximab** has improved **PFS** and **OS** and represents a **standard of care treatment** in this biomarker-selected population
- Correct **mitigation and management of adverse events** is paramount to maintain patients under an effective treatment and improve QoL
- **Different ADCs** are under development and will further reshape the treatment paradigm of ovarian cancer
- Many **open questions are still present**, such as biomarkers selection, correct sequence and overcoming mechanisms of resistance

Thanks for your attention