Best of ASCO 2020

Nicoletta Colombo

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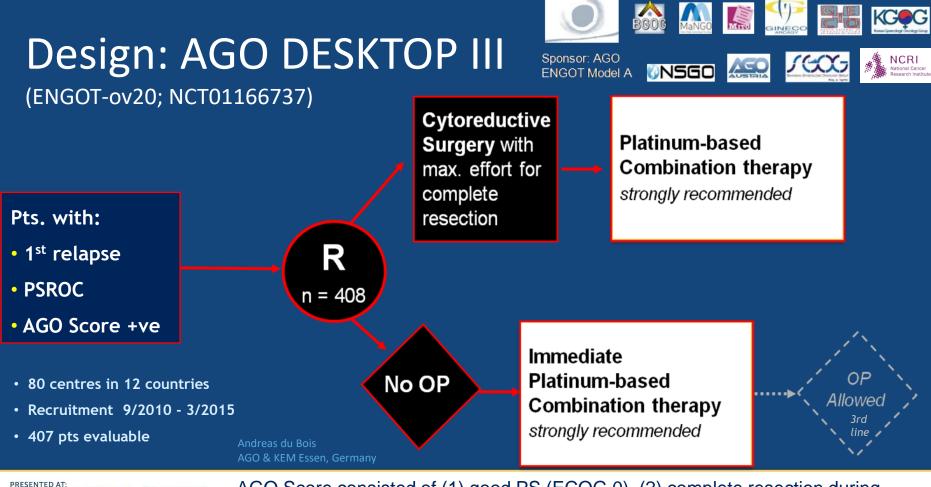
Ovarian Cancer

Gynecological cancers



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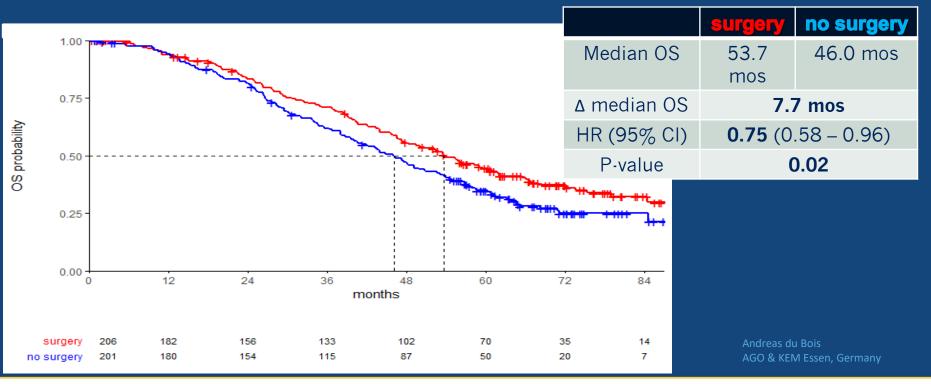
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AGO DESKTOP III: Outcome 1 (OS, ITT population)

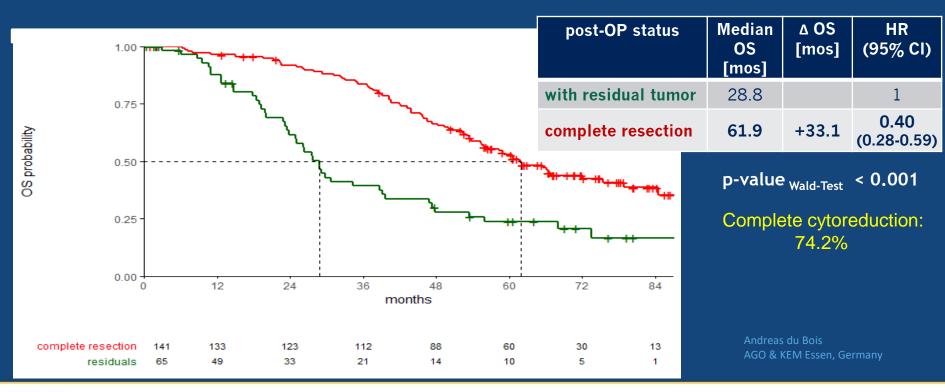
(AGO–OVAR OP.4; ENGOT-ov20; NCT01166737)



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AGO DESKTOP III: post hoc Subgroup analysis – surgical arm only

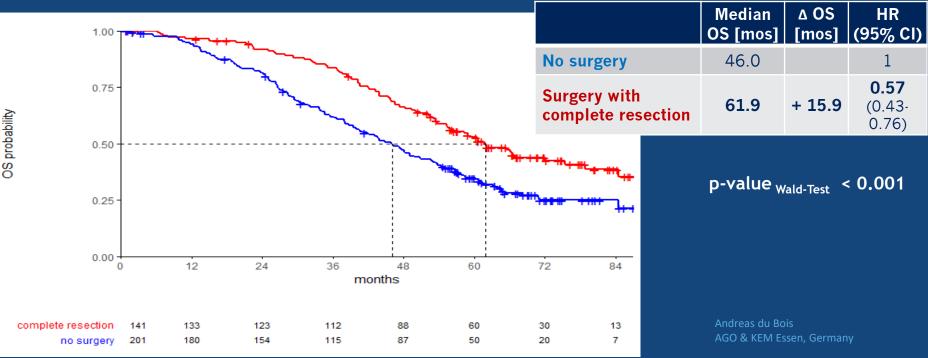
(OS by surgical outcome) - (AGO–OVAR OP.4; ENGOT-ov20; NCT01166737)



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AGO DESKTOP III: post hoc Subgroup analysis

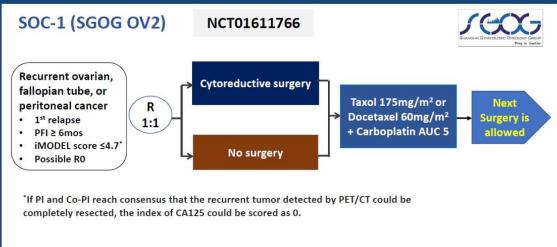
(impact of complete resection – cohort with incomplete resection excluded)



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SOC-1: Study Design



Co-Primary endpoints: PFS, OS **Secondary endpoints:** TFS, adjusted OS, QoL **Randomization strata:** Centers, iMODEL score, residual disease, enrolled in SUNNY trial Open: JULY 2012 Close: JUNE 2019 Target: 356 pts 4 centers with 200-800 ovarian cancer surgery per year participated, including the top 3 cancer centers in China

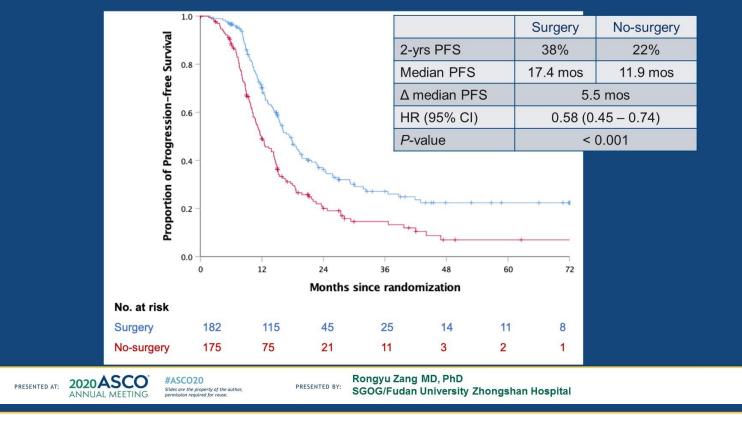
FPI: July 19, 2012 LPI: June 3, 2019

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SGOG SOC-1 : Co-Primary Endpoint -PFS



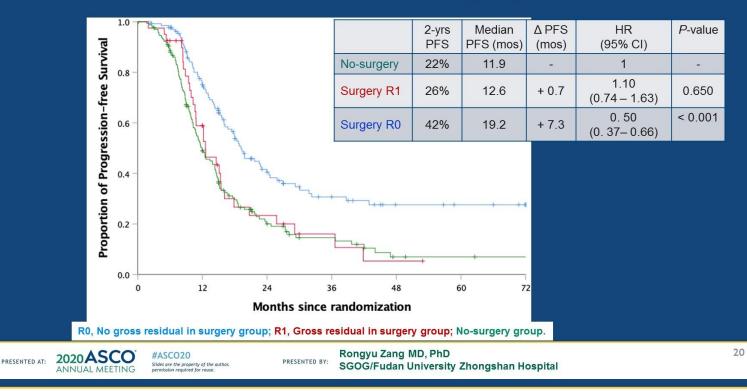


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Exploratory Endpoint of PFS: R0 vs. R1 or No-Surgery

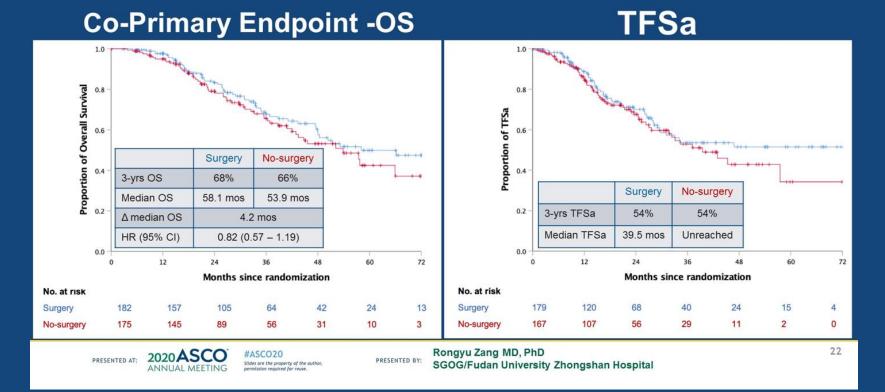




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SOC-1: Interim Analyses of OS and TFSa





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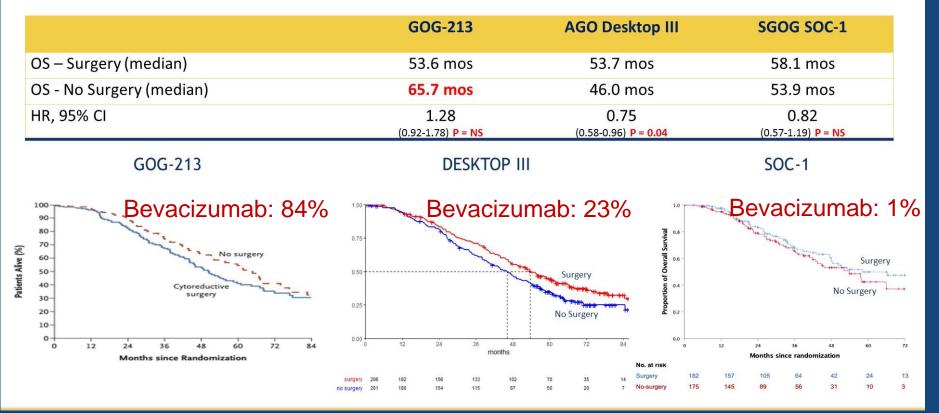
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Takeaways from DESKTOP III and SOC-1

- Both claim secondary cytoreduction favorably impacts patients
 - DESKTOP III: met primary endpoint OS
 - SOC-1: met primary endpoint of PFS (OS immature and not significant)
- Both support a triage algorithm for patient selection which can identify patients likely to benefit in ~75% candidates
 - Both caution suboptimal resection is no better and may be worse than no surgery
- Both advocate that such decision be made by experts in facilities with high surgical competency



GOG-213, DESKTOP III and SOC-1 Comparison: OS



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Final overall survival results from SOLO2/ENGOT-ov21: a Phase III trial assessing maintenance olaparib in patients with platinum-sensitive, relapsed ovarian cancer and a BRCA mutation

Andrés Poveda,¹ Anne Floquet,² Jonathan Ledermann,³ Rebecca Asher,⁴ Richard Penson,⁵ Amit Oza,⁶ Jacob Korach,⁷ Tomasz Huzarski,⁸ Sandro Pignata,⁹ Michael Friedlander,¹⁰ Alessandra Baldoni,¹¹ Tjoung-Won Park-Simon,¹² Gabe Sonke,¹³ Alla Lisyanskaya,¹⁴ Jae-Hoon Kim,¹⁵ Elias Abdo Filho,¹⁶ Ignace Vergote,¹⁷ Phil Rowe,¹⁸ Eric Pujade-Lauraine¹⁹

¹Initia Oncology, Hospital Quirónsalud, Valencia and GEICO, Spain; ²Institut Bergonié, Comprehensive Cancer Centre, Bordeaux and GINECO, France; ³UCL Cancer Institute, University College London, London and NCRI, UK; ⁴University of Sydney, Camperdown, Sydney, Australia; ⁵Harvard Medical School, Massachusetts General Hospital, Boston, MA, USA; ⁶Princess Margaret Cancer Centre, University of Toronto, Toronto, Canada; ⁷Sheba Medical Center, Tel Aviv University, Tel Hashomer and ISGO, Israel; ⁸Department of Genetics and Pathology, Pomeranian Medical University and Read-Gene SA, Grzepnica, Szczecin, Poland; ⁹Istituto Nazionale Tumori 'Fondazione G Pascale', IRCCS, Napoli and MITO, Italy; ¹⁰University of New South Wales Clinical School, Prince of Wales Hospital, Randwick, Australia; ¹¹Istituto Oncologico Veneto, IOV-IRCCS, Padova and MANGO, Italy; ¹²Department of Gynaecology and Obstetrics, Hannover Medical School, Hannover and AGO, Germany; ¹³The Netherlands Cancer Institute, Amsterdam and DGOG, The Netherlands; ¹⁴St Petersburg City Clinical Oncology Dispensary, St Petersburg, Russia; ¹⁵Yonsei University College of Medicine, Seoul, South Korea; ¹⁶Instituto do Câncer do Estado São Paulo-Faculdade de Medicina da Universidade de São Paulo, São Paulo, Brazil; ¹⁷University Hospital Leuven, Leuven Cancer Institute, Leuven and BGOG, Belgium; ¹⁸AstraZeneca, Cambridge, UK; ¹⁹Université Paris Descartes, AP-HP, Paris, France ClinicalTrials.gov identifier: NCT01874353. This study was sponsored by AstraZeneca and is part of an alliance between

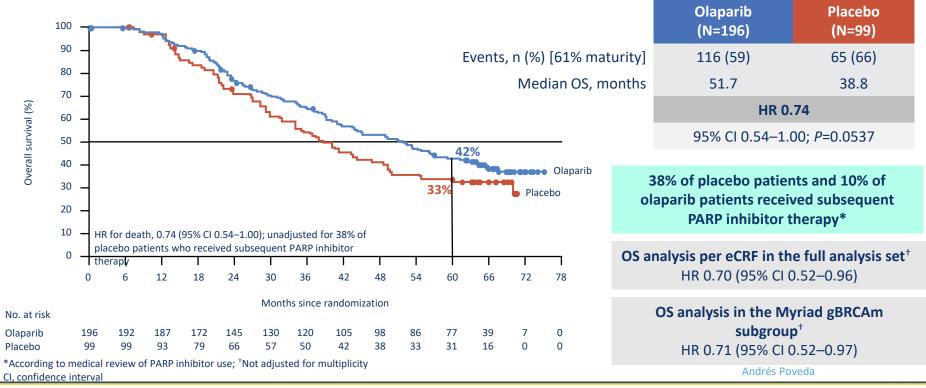
AstraZeneca and Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA

Andrés Poveda



SOLO2: final analysis of OS

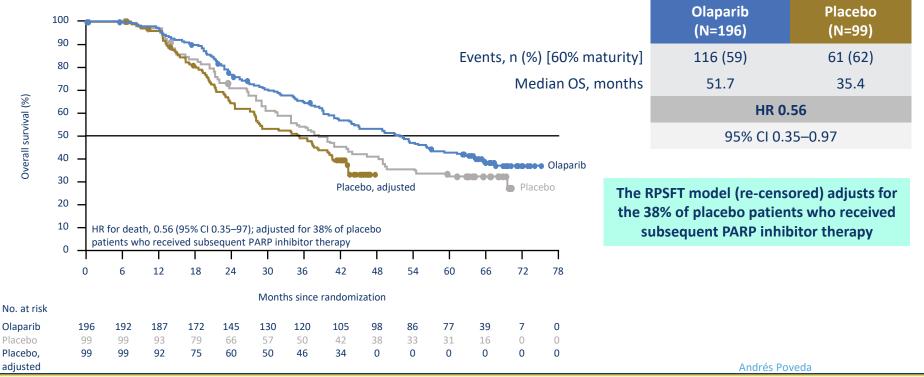
Median OS improved by <u>12.9 months</u> with maintenance olaparib over placebo, despite 38% of placebo patients receiving subsequent PARP inhibitor therapy



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SOLO2: final analysis of OS, adjusted for subsequent PARP inhibitor therapy in the placebo group

Median OS improved by <u>16.3 months</u> with maintenance olaparib over placebo, after adjusting for subsequent PARP inhibitor therapy in placebo patients

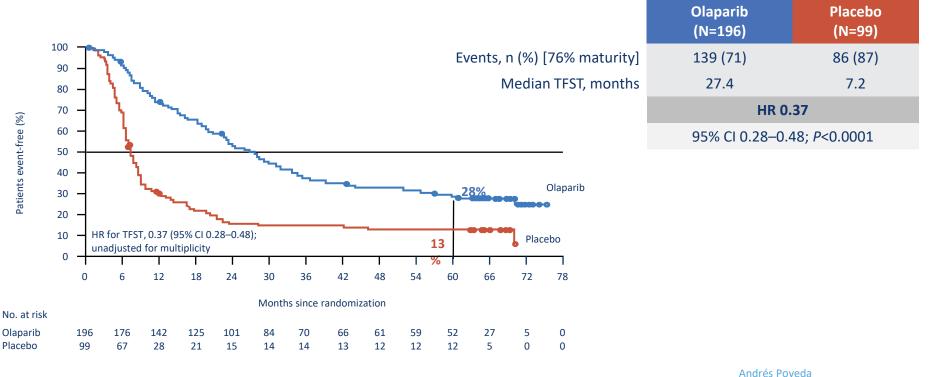


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SOLO2: time to first subsequent therapy

At 5 years, 28% of olaparib patients vs 13% of placebo patients were alive and had not received subsequent therapy



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SOLO2: AEs of special interest – primary and final analyses^{*,†}

	Olaparib (N=195)		Placebo (N=99)	
	Primary	Final	Primary	Final
Mean total treatment duration (SD), months	17.4 (9.8)	29.1 (24.7)	9.0 (8.1)	13.1 (18.6)
MDS/AML, n (%) During the safety follow-up period (TEAE) After the safety follow-up period (non-TEAE)	4 (2)	16 (8) 7 (4) 9 (5)	4 (4)	4 (4) 0 4 (4)
Pneumonitis, n (%)	3 (2)	3 (2)	0	0

MDS/AML

- Actively solicited throughout study treatment and follow-up
- Incidences should be interpreted in the context of their late onset[‡] and the ٠ longer OS observed with olaparib vs placebo
- Association with the number of prior platinum regimens, olaparib ٠ treatment and other potential risk factors is being explored

In patients with newly diagnosed ovarian cancer and a BRCAm, at median follow-up of 65 months, MDS/AML occurred in 1% of olaparib patients and no placebo patients¹

*Includes AEs that occurred outside safety follow-up period (during treatment and up to 30 days after discontinuation); *New primary malignancies (excluding hematologic malignancies) occurred in one olaparib patient (1%) and one placebo patient (1%) in the primary analysis, and in eight olaparib patients (4%) and two placebo patients (2%) in the final analysis; *After the safety follow-up period AML, acute myeloid leukemia; MDS, myelodysplastic syndrome 1. AstraZeneca data on file for the SOLO1 trial (NCT01844986)

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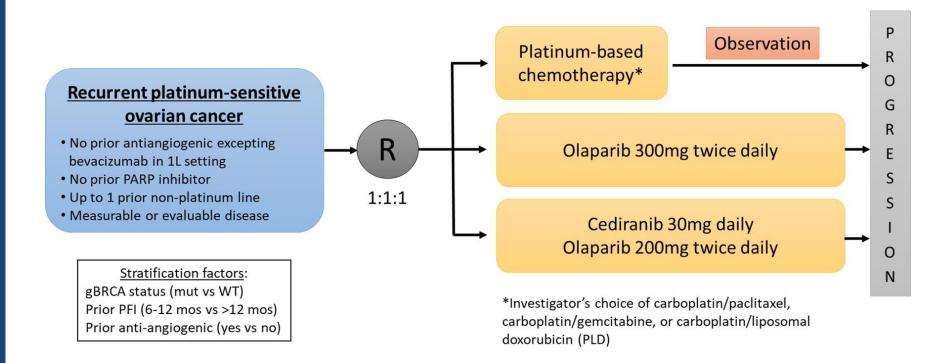
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Andrés Poveda

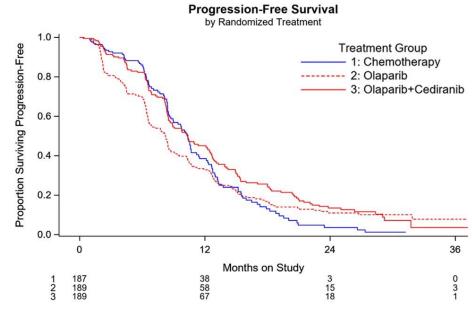
NRG-GY004: Study Design

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Primary Endpoint: Progression-Free Survival (ITT)



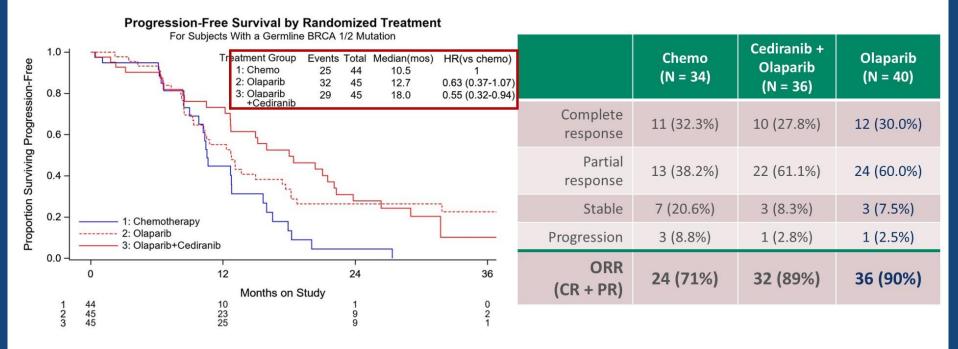
	Chemo [†]	Cediranib + Olaparib	Olaparib	
# of Pts	187	189	189	
# of Events	109	140	162	
Median PFS (mos)	10.3	10.4	8.2	
HR for PFS vs chemo (95% Cl)	1	0.856 (0.663-1.105)	1.20 (0.933-1.54)	
p value		0.077		

- [†]Choice of chemotherapy, N (%)
- Carboplatin/PLD: 89 (47.6%)
- Carboplatin/gemcitabine: 51 (27.2%)
- Carboplatin/paclitaxel: 47 (25.1%)

Joyce F. Liu



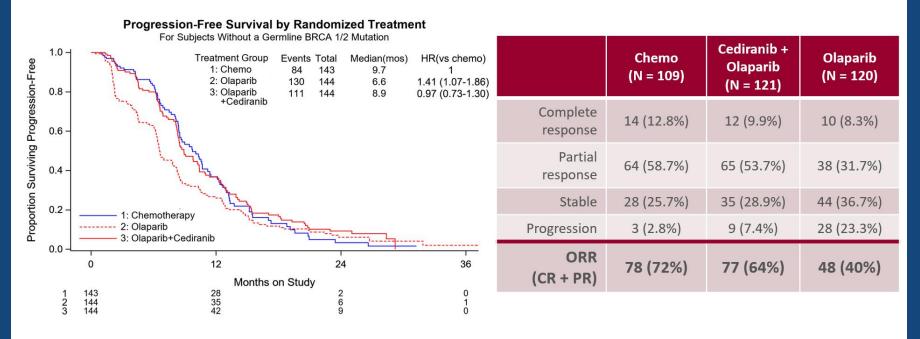
Prespecified subset analysis: gBRCAmt outcomes



Joyce F. Liu



Prespecified subset analysis: gBRCAwt outcomes





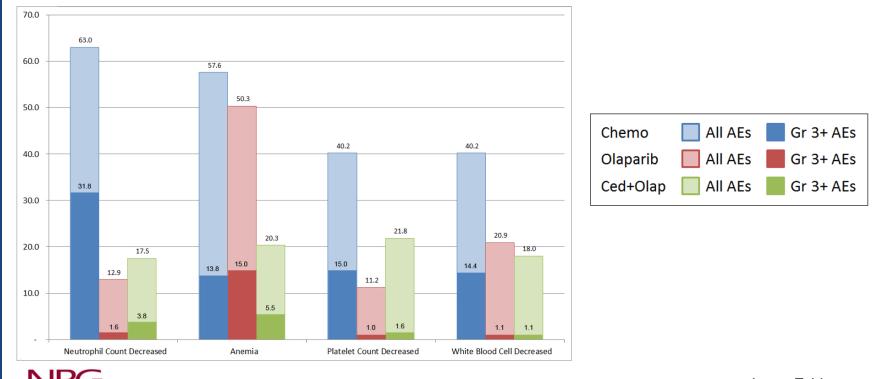
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Treatment-emergent adverse events: hematologic

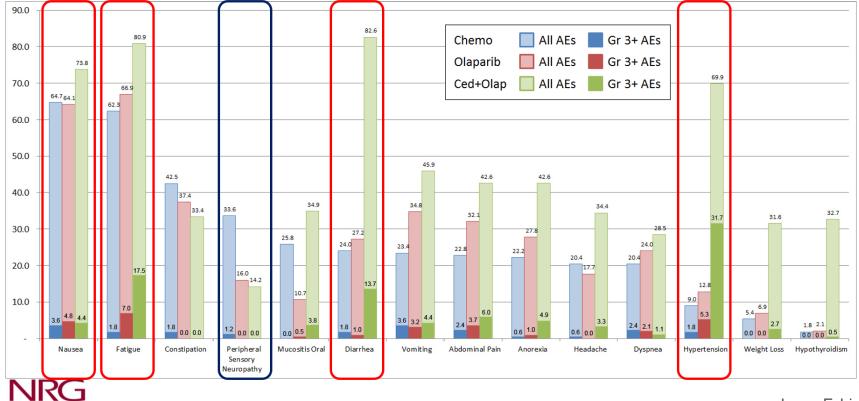


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Treatment-emergent adverse events: non-heme



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Treatment discontinuation rates

	Chemotherapy (N = 187)	Cediranib + Olaparib (N = 189)	Olaparib (N = 189)
Adverse Event	28 (15.0%)	40 (21.2%)	16 (8.5%)
Death	3 (1.6%)	1 (0.5%)	2 (1.1%)
Patient Withdrew	19 (10.2%)	17 (9.0%)	5 (2.6%)
Bowel Obstruction	0 (0.0%)	3 (1.6%)	0 (0.0%)
Other Reason	13 (7.0%)	15 (7.9%)	8 (4.2%)
Withdrew without receiving treatment	20 (10.7%)	6 (3.2%)	2 (1.1%)

Joyce F. Liu



Conclusions

- Combination cediranib/olaparib did not meet the primary endpoint of improved PFS compared to platinum-based chemotherapy, but had comparable clinical activity (PFS, ORR)
- In patients with gBRCA mutation, both olaparib and cediranib/olaparib demonstrated substantial activity.
- Non chemotherapy SOC options? The future BUT we need to carefully consider the toxicity profiles and management
- What about other patient populations GY005 (randomized study in platinum resistant ovarian cancer) is ongoing?



Endometrial Cancer



A Phase 2 trial of the WEE1 inhibitor adavosertib (AZD1775) in recurrent uterine serous carcinoma

Joyce F. Liu¹, Niya Xiong¹, Susana M. Campos¹, Alexi A. Wright¹, Carolyn Krasner¹, Susan Schumer¹, Neil Horowitz^{1,2}, Jennifer Veneris¹, Nabihah Tayob¹, Stephanie Morrissey¹, Gabriela West¹, Roxanne Quinn¹, Ursula A. Matulonis¹, Panagiotis A. Konstantinopoulos¹

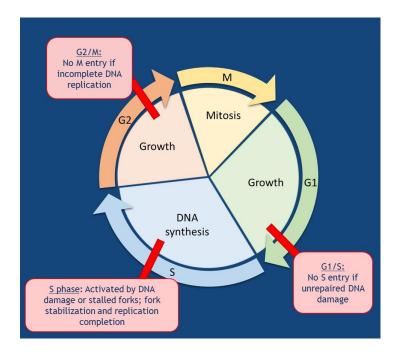
¹Dana-Farber Cancer Institute, Boston, MA; ²Brigham and Women's Hospital, Boston, MA



Detection of DNA Damage Results in Activation of Checkpoints That Enforce Cell Cycle Arrest

Cell cycle checkpoints slow down the cell cycle

- Allow time for appropriate DNA replication
- Prevent progression to mitosis with DNA damage or underreplicated DNA



WRTUAL ESVO^{congress} Adavosertib (AZD1775) inhibits WEE1 and may be most active in p53-mutant background

Cell cycle checkpoints slow down the cell cycle

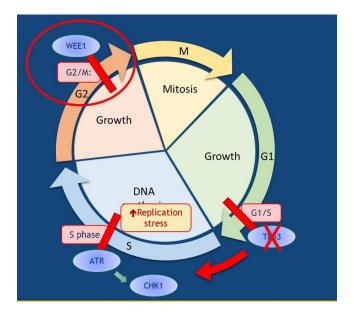
- Allow time for appropriate DNA replication
- Prevent progression to mitosis with DNA damage or underreplicated DNA

Cells with TP 53 mutation/loss lose their G1/S checkpoint

- Leads to early entry into S phase
- Increases replication stress
- Increases dependency on the G2/M checkpoint

WEE1 is a Key regulator of G2/M checkpoint

• WEE1 inhibition leads to disregulation of the G2/M checkpoint and to mitotic catastrophy





Study Conduct

• 35 women enrolled to study between Oct-11-2018 and Sep-30-2019

- 34 patients considered evaluable
- 1 patient withdrew for non-AE, non-clinical personal reasons after receiving 5 doses of study drug
- Data cut-off for analysis was Apr-15-2020
- Median follow-up time 5.9 months

Patient characteristics

Overall. N = 34Median age in years (range) 70.2 (58.9-88.5) Race White 29 (85.3%) Black or African American 2 (5.9%) 2 (5.9%) Asian Other 1 (2.9%) Stage at initial diagnosis 8 (23.5%) 3 (8.8%) 13 (38.2%) ш IV 10 (29.4%) **ECOG Performance Status** 11 (32.4%) 23 (67.6%) Prior Lines Median (range) 3 (1-8)

#6009, ASCO 2020

Primary endpoints: - ORR

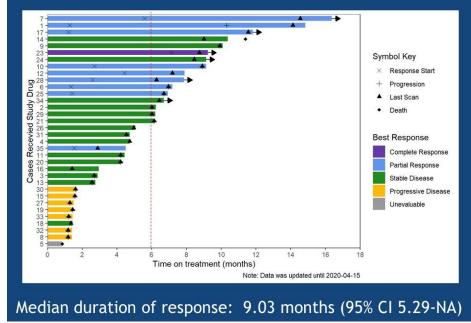
- PFS6



Clinical Activity: response rate

Best Overall Response	Overall N=34
Complete response (confirmed)	1 (2.9%)
Partial response Confirmed Unconfirmed	8 (23.5%) 1 (2.9%)
Stable disease ≥ 6 months < 6 months	7 (20.6%) 9 (26.5%)
Progressive disease	7 (20.6%)
Unevaluable	1 (2.9%)
Objective response rate (confirmed and unconfirmed)	10 (29.4%)
Clinical benefit rate (CR + PR + SD≥6 mos)	17 (50.0%)

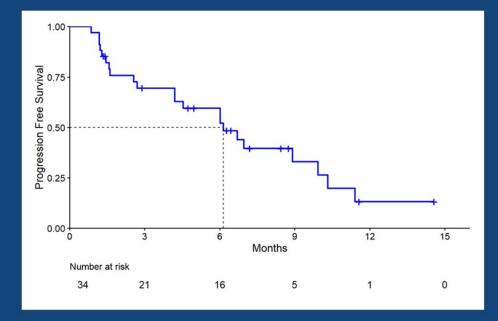
Clinical activity is durable in many patients



#6009, ASCO 2020



Clinical Activity: progression free survival



Median PFS	6.14 mos (95% CI 4.21-9.92)
PFS rate at 6 months	59.6% (95% CI 40.6%-74.3%)

#6009, ASCO 2020



#6022 : A Big Ten Cancer Research Consortium phase II trial of pembrolizumab with carboplatin and paclitaxel for advanced or recurrent endometrial cancer.



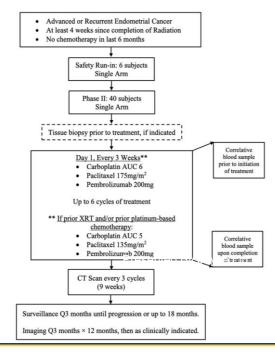
Authors: Mario Javier Pineda¹, Jeanne Schilder², Emily K. Hill³, Deanna Gek Koon Teoh⁴, Emma Longley Barber^{5,6}, Sharon E. Robertson², Anna Everett Strohl^{5,6}, Jiahui Xu⁵, Masha Kocherginsky⁵, Daniela Matel^{5,6}; ¹Ironwood Cancer and Research Centers, Gilbert, AZ; ²Indiana University, Indianapolis, IN; ³University of Iowa Hospitals and Clinics, Iowa City, IA; ⁴University of Minnesota, Minneapolis, MN; ⁵Northwestern University Feinberg School of Medicine, Chicago, IL; ⁶Northwestern University, Chicago, IL

Background:

- 20-25% of patients with endometrial cancers (EC) are initially detected at an advanced stage and have poor overall response to chemotherapy
- Historical objective response rates (ORR) to chemotherapy is ~50%.

Methods:

- Single-arm, open-label, multi-center phase II study
- Population:
 - RECIST measurable advanced or recurrent EC
 - May have had 1 prior platinum-based regimen, with a platinum free interval ≥ 6 months, ≤ one non-platinum chemotherapy, or prior hormonal therapy.
- Treatment: See Schema
- Primary endpoint was ORR per immune-related RECIST
- 46 subjects enrolled. Provided 77% power to detect 15% ORR improvement compared to historical controls, with one-tailed test and 10% type I error rate (*a priori*)



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#6022

Key De	mographics	Results	
Variable N	Conclusions: Pe	mbrolizumab plus standard of	
Grade 1 2 3	care Carboplati	n/Paclitaxel for advanced or metrial cancer showed a	3 (74.4%)
Diagnosis at Enrollme Primary Recurrent Histology		cant improvement in overall ompared to historical outcomes	t: 9 months : Not reached efciert - MMRStat=Proficient
Clear Cell Endometrioid Serous Other	• Toxicity was s chemotherap	similar to standard ay alone	
Mismatch Repair Prot Proficient Deficient		ndomized trial is indicated	ime in months 1 1 1 0 3 2 2 0 i 12 15 11 Time in months
Unknown	10 22	ố 3 ổ ở 12 13 tê 21 24 Time in months	Time in months

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NCI 10104: A Randomized Phase 2 Study of Cabozantinib in Combination with Nivolumab in Advanced, Recurrent Metastatic Endometrial Cancer

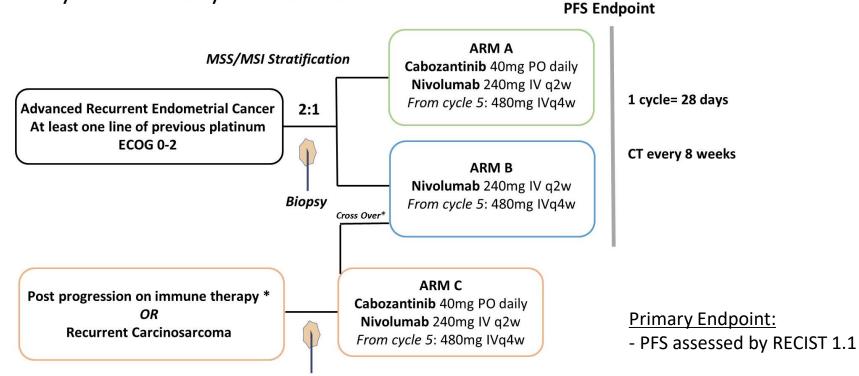
Stephanie Lheureux, Daniela Matei, Panagiotis Konstantinopoulos, Matthew Block, Andrea Jewell, Stephanie Gaillard, Michael McHale, Carolyn McCourt, Sarah Temkin, Eugenia Girda, Floor Backes, Theresa L Werner, Linda Duska, Siobhan Kehoe, Lisa Wang, Rachel Wildman, Ben X Wang, Pamela S Ohashi, John Wright, Gini Fleming

Princess Margaret Hospital, Toronto; Indiana University Melvin and Bren Simon Cancer Center, Indianapolis; Dana-Farber Cancer Institute, Boston; Mayo Clinic, Rochester; Johns Hopkins School of Medicine, Baltimore; McHale Inst Cancer and Hem Treatmt, Sioux Falls; Washington University School of Medicine, St. Louis; Virginia Commonwealth University, Richmond; Rutgers Cancer Institute of New Jersey, New Brunswick; Ohio State University, Columbus; University of Utah, Salt Lake City; University of Virginia, Charlottesville; The University of Texas Southwestern Medical Center, Dallas; IDB CTEP NCI; University of Chicago Medicine, Chicago



#6010

Study Summary Schema



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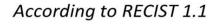
Response & Duration Arm C

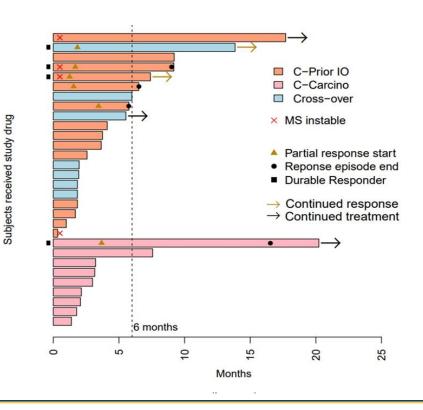
Post IO (n=21)

- Objective Response Rate: 5
- Stable Disease: 12

Carcinosarcoma (n=9)

- Objective Response Rate: 1
- Stable Disease: 4







Cervical Cancer



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Sequential chemoradiation versus radiation alone or concurrent chemoradiation in adjuvant treatment after radical hysterectomy for stage IB1-IIA2 cervical cancer (STARS study): a randomised, controlled, open-label, phase 3 trial

Presenter : He Huang, MD Principal Investigator: Prof. Jihong Liu MD, PhD

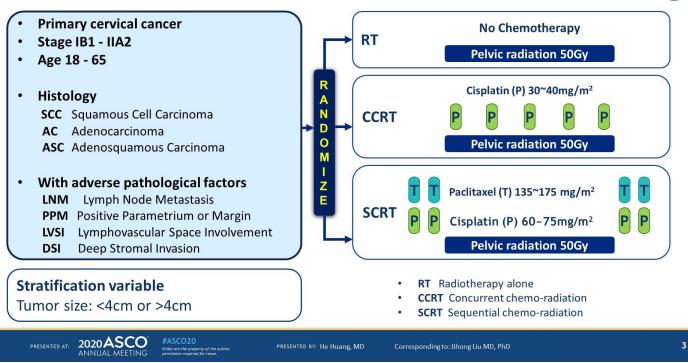
Department of Gynecologic Oncology SUN YAT-SEN UNIVERSITY CANCER CENTER

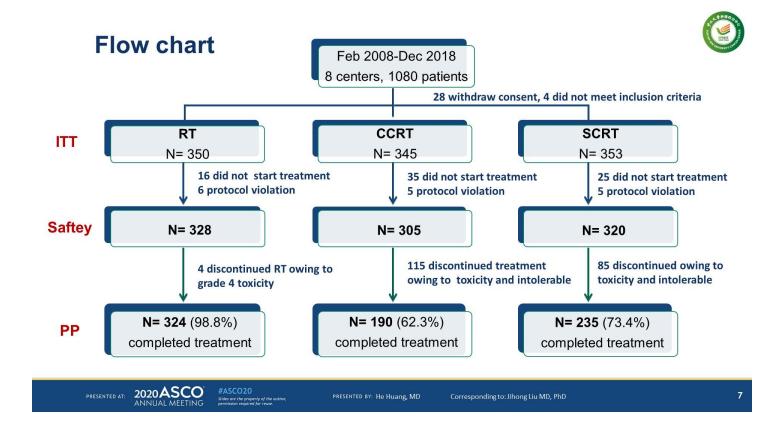
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STARS: Schema







Disease Free Survival



Per-Protocol population

two-sided P=0.026 by log-rank test 1.0 two-sided P=0.03 by log-rank test 1.0 HR for recurrence or death, 0.47 (95% CI, 0.30 to 0.74, SCRT compared to RT) HR for recurrence, 0.52 (95% CI, 0.35 to 0.76, SCRT compared to RT) Proportion of Disease-free Survival Propotion of Disease-free Survival HR for recurrence or death, 0.67 (95% CI, 0.39 to 1.14, SCRT compared to CCRT) HR for recurrence, 0.65 (95% CI, 0.44 to 0.96, SCRT compared to CCRT) 0.9 0.9 0.8 0.8 0.7 0.7 3-year DFS 3-year DFS Events Events No. (%) Survival Rate (95%CI) No. (%) Survival Rate (95%CI) SCRT N=353 44 (12.5) 0.90 (0.86-0.94) SCRT N=235 26 (11.1) 0.91 (0.87-0.95) 0.6 0.6 0.85 (0.81-0.89) CCRT N=190 27 (14.2) 0.86 (0.80-0.92) CCRT N=345 60 (17.4) RT N=350 68 (19.4) 0.82 (0.78-0.86) RT N=324 63 (19.4) 0.82 (0.78-0.86) 0.5 0.5 72 72 96 24 48 96 120 24 48 120 0 0 Months since randomisation Months since Randomization No. at Risk No. at Risk 150 98 36 92 35 RT 350 274 6 RT 324 259 142 6 CCRT 345 265 154 103 41 6 190 147 89 60 17 2 CCRT SCRT 353 293 171 112 44 11 SCRT 235 201 115 76 29 8

 Sequential chemoradiation was associated with improved disease-free survival compared with radiation alone or concurrent chemoradiation

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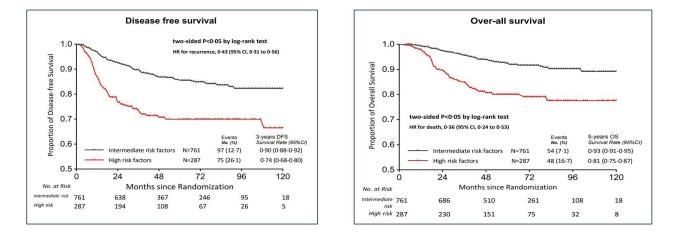
Intention to treat population

Presented By He Huang at TBD

DFS and OS in the intermediate-risk vs high-risk subgroup

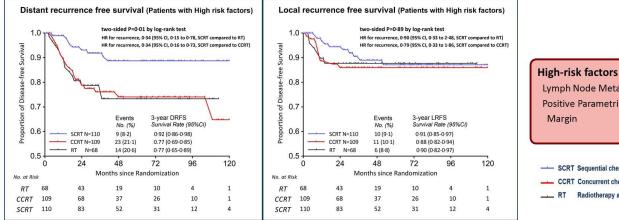


Intermediate risk factors: lymphovascular space involvement (LVSI), deep stromal invasion (DSI) High risk factors: lymph node metastasis (LNM, positive parametrium or surgical margin (PPM)





Distant and local recurrence free survival in the high-risk subgroup



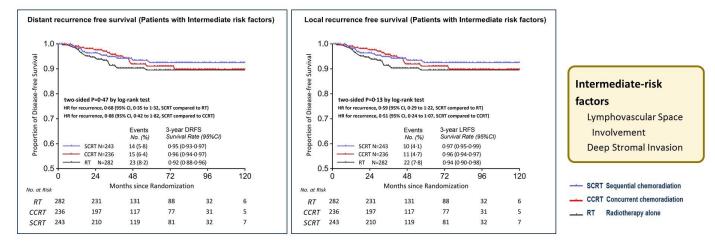
- Lymph Node Metastasis Positive Parametrium or Margin ---- SCRT Sequential chemoradiation CCRT Concurrent chemoradiation
- Radiotherapy alone

 Sequential chemoradiation improved distant recurrence free survival compared with radiation alone or concurrent chemoradiation



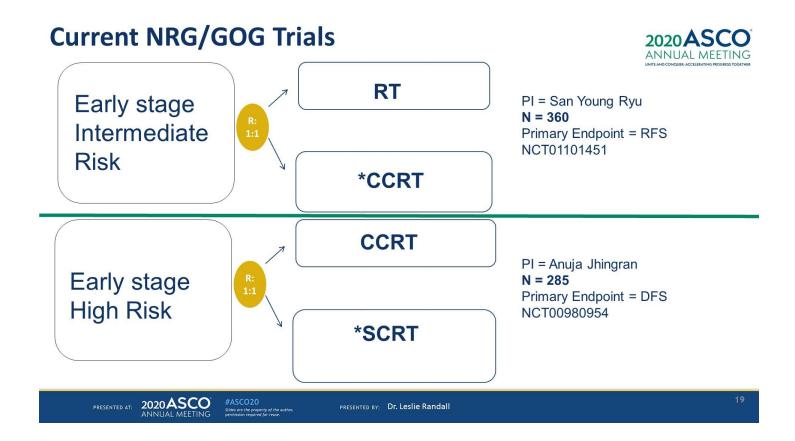
Distant and local recurrence free survival in the intermediate-risk group





 No significant differences in distant or local recurrence free survival in patients with intermediate-risk factors among the 3 arms.





CAMRELIZUMAB PLUS APATINIB IN PATIENTS WITH ADVANCED CERVICAL CANCER. A MULTICENTER, OPEN LABEL, SINGLE ARM, PHASE II TRIAL

#6021 Lan et al Sun Yat-sen University, China

Background:

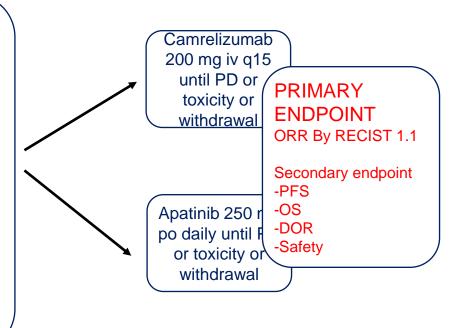
- PD1/PDL1 inhibitors demonstrate efficacy in this setting
- Camrelizumab is a fully humanized, monoclonal antibody against PD-1.

The aim:

 To assess the efficacy and safety of camrelizumab plus apatinib, a tyrosine kinase inhibitor targeting VEGFR2

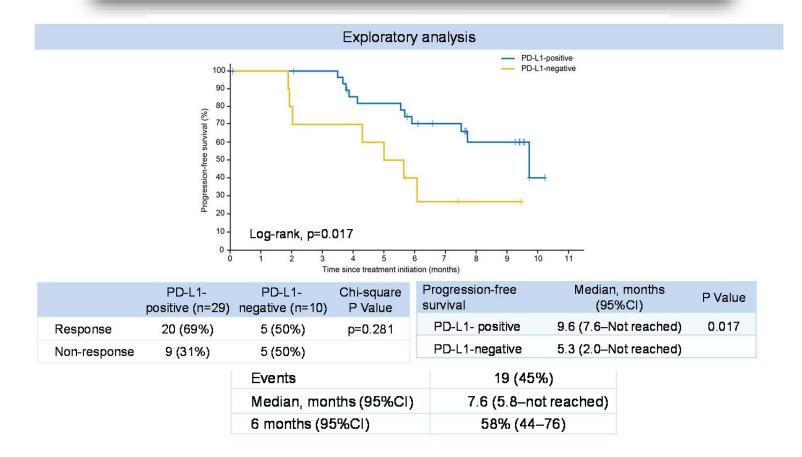
STUDY DESIGN

- Recurrent, persistent or metastatic cervical cancer
- Age 18 70
- ECOG 0 1
- Measurable disease by RECIST 1.1
- At least 1 prior line of chemo





EFFICACY



SAFETY

• 43 (96%) of 45 patients had at least one treatment-related adverse event.

Treatment-related adverse events	Grade 1-2	Grade 3	Grade 4
Hypertension	27 (60%)	11 (24%)	0
Anaemia	18 (40%)	9 (20%)	0
Proteinuria	25 (56%)	0	0
Fatigue	16 (36%)	7 (16%)	0

CONCLUSIONS

Camrelizumab combined with apatinib have encouraging antitumor activity and manageable toxicities ir
patients with advanced cervical cancer. Further study in larger, randomized, controlled trials to validate
our findings is warranted.

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4 (9%)	0	0
2 (4%)	1 (2%)	0
0	1 (2%)	0
0	1 (2%)	0
0	0	1 (2%)
	4 (9%) 2 (4%) 0	4 (9%) 0 2 (4%) 1 (2%) 0 1 (2%) 0 1 (2%)







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