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Conference Report

The American Society of Clinical Oncology 2017 Annual Meeting: A review and summary of selected abstracts

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1. Introduction

This year the American Society of Clinical Oncology (ASCO) Annual Meeting took place from June 2–6, 2017 again in Chicago, Illinois. The theme for this year's meeting was: Making a difference in Cancer Care with YOU. This statement set the tone for a meeting focusing on the personalization of cancer care both by biomarker driven trials and targeted therapies. It represented a celebration of the collaboration among cancer caregivers, physicians, NPs, PAs, RNs and families. Delivering on this theme, the main plenary session contained papers on a large meta-analysis in colorectal cancer, phase III studies in targeted therapy for prostate cancer and breast cancer plus a novel patient reported outcome process that improved overall survival (OS) across cancer subtypes. This year's review will condense selected gynecologic cancer phase III studies presented at the meeting and include data in table form for phase II studies included in the meeting program. (Tables 1 and 2)

2. Surgery

Bulk reducing surgery has remained a backbone of ovarian cancer treatment despite advances in neoadjuvant chemotherapy. Three of the abstracts selected for oral presentation focused on this topic.

2.1. No value to lymphadenectomy

The decision to perform systemic lymphadenectomy at the time of primary surgical debulking after achieving complete resection (RO) for this disease has remained controversial. Lymphadenectomy in Ovarian Neoplasms (LION) study (abstract 5500) was a prospective randomized study to evaluate the utility of lymphnode dissection (LND) in patients with advanced ovarian cancer. Eligible patients had to have stage IIB-IV ovarian cancer and deemed resectable preoperatively by the surgeon. Intra-operatively the patients had to have a complete RO and the absence of clinically bulky nodes. They were then randomized to systematic pelvic and periaortic node dissection vs. no further surgery. Six hundred and fifty women were randomized and the groups were well balanced for stage, grade, age, and performance status. The complete resection rate for both groups was a remarkable 99.4%. Operative time, blood loss, transfusion, ICU care, post op requirement of antibiotics, and rate of relaparotomy for complications were all statistically significantly higher in the LND group. The primary endpoint of OS showed no significant difference between the groups with a median OS of 65.5 months in the LND group and 69.2 months in the no LND group ($p = 0.62$). These data demonstrate the lack of benefit of systematic lymphadenectomy in patients with complete cytoreduction for ovarian cancer and the authors suggest that this procedure be omitted to spare patients the increased morbidity.

2.2. Preliminary data on secondary cytoreduction

Another surgical conundrum in ovarian cancer is the question of secondary cytoreduction for patients who have experienced a

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Table 1
Phase II trials of novel drug and cytotoxic treatment strategies in ovarian, fallopian tube, and primary peritoneal carcinomas.

Type	Abs. no	Agent/dose	Mechanism	Type of patients	Results	HR	p-Value	Major toxicities
Phase II single agent	5522	Oral ENMD-2076 (275 mg)[f], qd	Multi-target kinase inhibitor with selective activity against the mitotic kinase Aurora A, VEGFRs, and FGFRs	Recurrent CCOC with prior platinum therapy (n = 37)	PR 5% (2 pts) (1 unconfirmed) SD 68% (25 pts), PD 26% (10 pts) Median PFS 3.7 months Among ARID1A-neg pts (51%) - PFS 4.1 vs 3.6 months Among PIK3CA-mut pts (54%) - PFS 3.7 vs 5.0 months No PFS diff with PTEN status	–	 0.024 0.038	htn 57% (21 pts), 8 G3 n 49% (18 pts), 1 G1 d 46% (17 pts), 4 G3
	5577	Oral orteronel (300 mg), bid, 28-day cycle	17,20-lyase inhibitor	Metastatic/locally advanced, non-resectable granulosa-cell ovarian tumor(s) with somatic FOXL2 402C → G (C134W) mutation; no prior CYP17 inhibitor treatment (n = 10)	Median PFS 3 months SD >12 months in 3 (30%) CBR 50% 7 (70%) progressed, 2 (20%) died Low recruitment, study terminated	–	–	6 suspected unresected AEs: chest pain, f, febrile ANC, eosinophilia, ANC, and An
	5581	IV pembrolizumab (200 mg), q3w	Anti-PD-1 antibody	High-grade serous OC (n = 14)	SD 5 (36%), PD 9 (64%) No significant change in CD4, CD8, or myeloid-derived suppressor cells Mean CD4/CD8 PD-1 expression at baseline higher in tumor shrinkage pts, along with increased mutation burden	–	 0.02 0.048	G3/4 AEs in 4 (22%), none fatal and the most common were f and hyponatremia
	e17039	IV hu3S193 (30 mg/m^2), q2w, 12 doses	Anti-Lewis-Y IgG1 antibody	Relapsed OC; Lewis-Y expression by IHC; KPS ≥70% with 2nd CR after 5–8 cycles ct, last dose ≤8 weeks ago (n = 28)	Median PFS 11.8 months PFS of 25+ months in 3 (10.7%)	–	–	No G4 toxicities n 57% (16 pts), 2 G3 v 54% (15 pts), 3 G3 hypersensitivity (9 pts), all <G3
Phase II combination	5541	Oral quisinostat (12 mg), 6 doses q2d for days 1–11 + IV P/C[d] on day 7; ≤6 cycles	Potent pan-HDAC inhibitor; cytotoxic	Recurrent, platinum-resistant, high-grade serous EOC/FTC/PPC (n = 30)	21 (67.7%) received all 6 cycles ORR 15 (50.0%) Median duration of response 5 months Median PFS 6 months	–	–	Serious AEs in 16.1%; G3/4 AEs in 71%, 48.4% temporarily discontinued due to AE, dose reduction in 22.6%; ANC (67.7%), n (61.3%), weakness (29%), PTLS (22.6%), neuropathy (19.4%), v (19.4%)
	5548	Oral napabucasin (240, 480, or 500 mg), bid + IV paclitaxel (80 mg/m^2), qw 3 of every 4 weeks	First-in-class cancer stemness inhibitor via inhibition of STAT3-driven gene transcription and spherogenesis of cancer stem cells	Advanced, platinum-resistant OC (n = 98)	Median PFS 3.0 months Median OS 9.3 months Among RECIST evaluated pts (n = 76) - DCR 65% - ORR 20% - CR 3%	–	–	G3 AEs: d (12.2%) and v (5.1%)
	5550	IV eribulin (1 mg/m^2) + (2 mg/kg) + oxaliplatin (30 mg/m^2), qw, 3 of every 4 weeks	Microtubule targeting agent; anti-VEGF antibody; cytotoxic	Platinum-resistant/refractory EOC, ECOG 0-2 (n = 34)	Median PFS 4 months RR 29% with a CBR of 76% CR 2 (6%), PR 8 (24%), SD 16 (47%) Elevated serum mutated p53/IL-6 had lower response and worse prognosis	–	–	Hematologic G3/4 AEs in 4 (11%); 1 > G2 hypoalbuminemia and edema which was manageable & tolerable
	5556	NA metformin followed by PDS or NA metformin + ct followed by IDS, all receiving adjuvant metformin + ct	Anti-hyperglycemic agent for type 2 diabetes; cytotoxic	Stage IIC-IV EOC/FTC/PPC (n = 38)	18-month PFS 65.4% Median PFS 21.7 months Estimated 3-year survival 73.5% Metformin-treated tumors had 3-fold decrease in ALDH + CSC at baseline	–	–	G3/4 AE in 1 (3%); d (18%), n (16%)
	5580	Continuous TTFields (200 kHz) + paclitaxel (80 mg/m^2), qw for 8 weeks then on days 1, 8, 15 of each 28-day cycle	Alternating electric fields disrupt mitotic spindle formation; cytotoxic	Platinum-resistant, unresectable OC (n = 31)	Median PFS 8.9 months PR 25%, SD 46.4% CBR 71.4% 50% reduction in CA-125 in 6 (19.4%) Median OS not reached	–	–	31% of all AEs were gastrointestinal, 31% respiratory events; most pts had mild-moderate skin irritation of with 2 (6.4%) were severe; 10 (32%) serious unrelated AEs with 1 discontinuation
	e17064	IV gemcitabine (1000 mg/m^2), days 1, 8 + IV bevacizumab (15 mg/kg), day 1, q3w	Cytotoxic; anti-VEGF antibody	Platinum-resistant, recurrent OC (n = 12)	77.8% completed 3 cycles of ct RR 66.7%	–	–	≥G3 ANC (5), PLTS (1), htn (1); no gastrointestinal perforation
Randomized Phase II	5508	4 courses IV P/C[a], tiw, alone or with ≥3 courses IV bevacizumab (15 mg/kg), q3w (open-label)	Cytotoxic; anti-VEGF antibody	High-grade serous or endometrioid EOC, FIGO stage III-IV, ECOG 0-2, considered unresectable, NACT + IDS planned (n = 68)	No diff in CMR at IDS Surgical feasibility 66.7 vs 88.6% No diff in optimal surgery rate Median PFS 20.3 months in both	1.14	0.029	Increased rates of serious AEs in control (69.7 vs 42.9%, p = 0.026); 8 pts w/ AEs of interest in bev arm: 3 G2 proteinuria, 2 G2/3 htn, 1 G3 EVF, 1 G3 ECF, 1 G3 DVT, 1 G2 bleeding, 1 G1 surgical dehiscence
	5515	No maintenance therapy vs oral letrozole (2.5 mg) maintenance therapy, qd	Aromatase inhibitor	G3 serous OC, FIGO stage III-IV, ER+ (n = 51) (macroscopic residual disease post-surgery receiving bevacizumab maintenance also included)	PFS at 12 months 65 vs 84% PFS at 24 months 46 vs 74% PFS at 12 months in subgroup receiving bev 41 vs 89%	–	0.02	–
	5520	HIPEC (cisplatin 75 mg/m^2, 90 minutes) vs no HIPEC	Cytotoxic	Stage III-IV primary EOC, with optimal cytoreductive surgery (n = 184)	Only diff was operation time (487 vs 404 mins) No significant survival benefit from HIPEC	–	<0.001	Only significant morbidity differences were An 67.4 vs 50% (p = 0.025) and elevated creatinine 15.2 vs 4.3% (p = 0.026)

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