Endocyte Inc.

Supplemental PRECEDENT Trial Analysis

December 13, 2011

Forward-Looking Statements

During the course of this presentation, we will make forward-looking statements regarding future events and our future performance. The words “believe”, “anticipate”, “expect”, “estimate”, “intend”, ”plan”, “may”, “will” and other similar expressions generally identify forward-looking statements. In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances are forward-looking statements. Forward-looking statements entail various significant risks and uncertainties that could cause our actual results to differ materially from those expressed in such forward-looking statements. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. We do not intend to update any of the information contained in any forward-looking statement, except as required by law.

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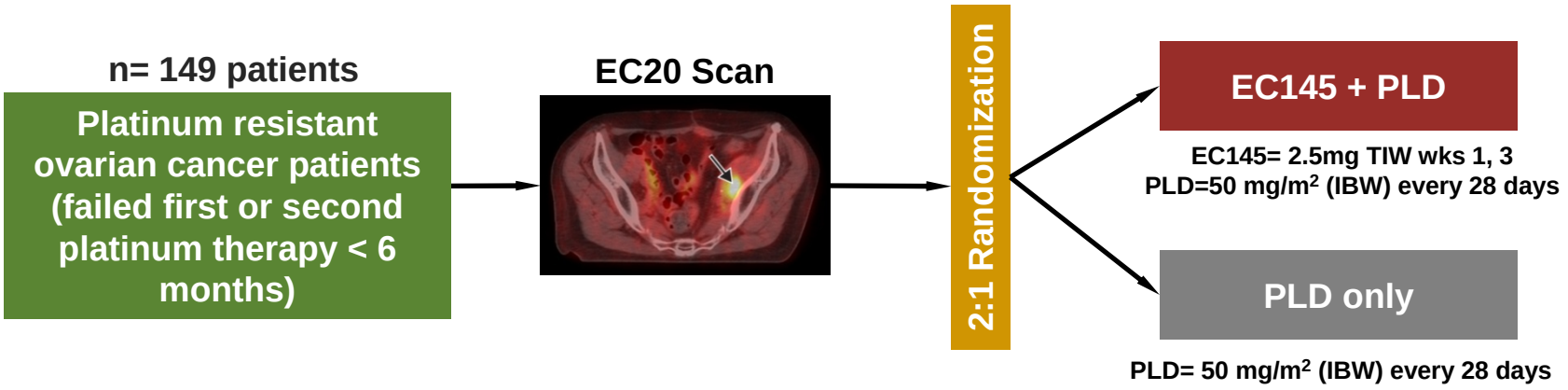
PRECEDENT Trial Supplemental Analysis

	Purpose	Results
EC20 Validation	Validate EC20 to select FR positive patients	Validated (inter-reader agreement 85%)
PFS Analysis	Test robustness of PFS primary endpoint (investigator assessed)	PFS robust (no evidence of bias) Confirmed PFS results in FR(++) group
Overall Survival	Update OS analysis (102 events)	OS underpowered and inconclusive

FR Positive Platinum-Resistant Ovarian Cancer Is an Attractive Patient Population for Drug Approvals

- Platinum-resistant ovarian cancer overall survival 12.7 months
- Current drugs don't delay progression or extend survival and have toxicities that reduce quality of life



EC20 Validates

Independent reader study validates EC20 to select FR positive patients for phase 3 study

	Reader Agreement
FR(+) ≥ 1 positive lesion	87%
FR(++) all lesions positive	85%

Targeted >70% agreement

PFS Analysis

Investigator PFS Assessment Passed Standard Battery of Tests for Robustness

Test for Imbalances	Pass / Fail	Results
Patient populations	Pass	Adjusted for imbalances in patient prognostic factors (e.g. performance status) HR 0.597*
Study discontinuance	Pass	Treat discontinuance as event HR 0.610*
Clinical progressions	Pass	Censor clinical progression HR 0.601*
Off-schedule assessments	Pass	Off-schedule assessments 4.6% equal in both arms
Investigator delays calling progression in treatment arm versus control arm**	Pass	IRC called progression earlier less often in treatment arm (Treatment 38% versus Control 43%).

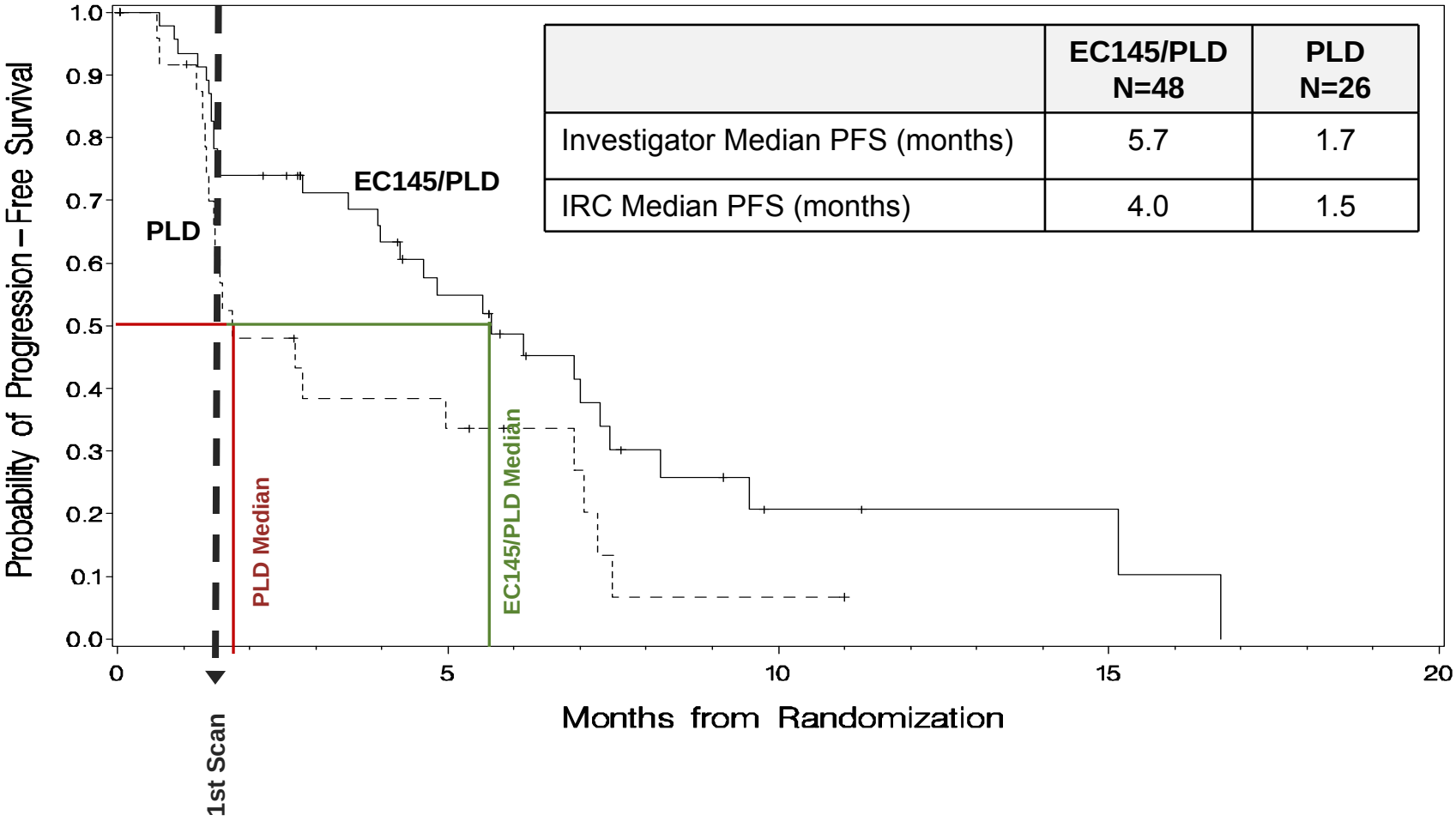
* **P-value ≤0.05**

** # Patients IRC PFS date Less than investigator / total # patients with > 1 CT scan

PFS Analysis

As Expected Treatment Arm Median Decreased More Than Control Arm

FR(+) Population



	EC145/PLD N=48	PLD N=26
Investigator Median PFS (months)	5.7	1.7
IRC Median PFS (months)	4.0	1.5

Note: # of patients with > 1 follow up CT scan – EC145/PLD 33 and PLD 11

PFS Analysis

Investigator and IRC PFS Results

PFS Median (Months)	Investigator PFS					IRC PFS				
	EC145/PLD	PLD	Δ	HR	p-value	EC145/PLD	PLD	Δ	HR	p-value
ITT	5.0	2.7	2.3	0.626	0.0310	4.2	2.0	2.2	0.768	0.2235
FR(+)	5.7	1.7	4.0	0.547	0.0406	4.0	1.5	2.5	0.652	0.1449
FR(++)	**5.5**	**1.5**	**4.0**	**0.381**	**0.0134**	**4.0**	**1.5**	**2.5**	**0.465**	**0.0498**

FR(++) results are statistically significant and clinically meaningful in both analyses

PFS Conclusions

- Primary endpoint (investigator assessed PFS) is robust and unbiased
- IRC confirmed statistically significant and clinically meaningful results in FR(++) group
- Greater confidence that phase 2 results can be repeated in phase 3 (blinded) confirmatory study

Overall Survival

Historical PLD Phase 3 Trials in Platinum Resistant Ovarian Cancer

Historical Median Overall Survival of 12.7 months (8.3 - 13.5 months)

Study	Drug	N	OS
Gordon et al. (2004)	**PLD**	**130**	**8.3**
	Topotecan	128	9.5
Mutch et al. (2007)	**PLD**	**99**	**13.5**
	Gemcitabine	96	12.7
Ferrandina et al. (2008)	**PLD**	**76**	**12.7**
	Gemcitabine	77	11.5
Vergote et al. (2009)	**PLD or Topotecan**	**229**	**13.5**
	Canfosfamide	232	8.5
Monk et al. (2010)	**PLD**	**115**	**12.4**
	PLD + trabectedin	113	14.2
Colombo et al. (2010)	**PLD**	**417**	**12.7**
	Patupilone	412	13.2

Overall Survival

Overall Survival Underpowered and Indeterminate

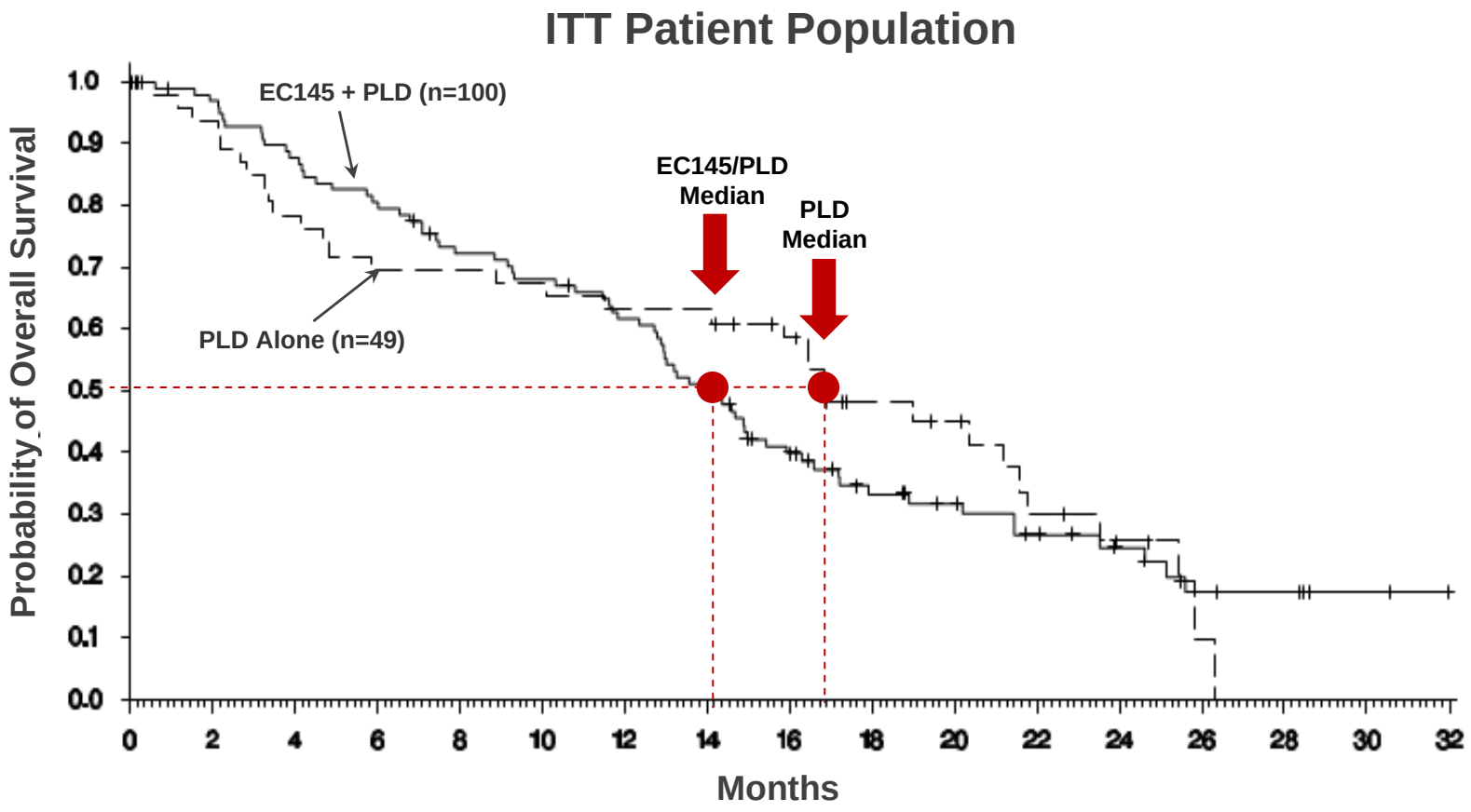
Overall Survival	ITT n=149		FR(++) n=38	
	EC145/PLD	PLD	EC145/PLD	PLD
Median (months)	14.1	16.9	14.0	16.4
Hazard Ratio *(95% CI)*	1.099 *(0.722, 1.673)*		1.420 *(0.631, 3.194)*	
6-month Survival Rate	*81%*	*70%*	*73%*	*60%*
12-month Survival Rate	*62%*	*63%*	*64%*	*53%*

- ITT OS hazard ratio is 1.0. Higher in FR(++) group
- PLD arm much longer than historical (16.9 versus 12.7 months)
- EC145/PLD arm median OS is longer than historical and early survival rates favor EC145/PLD

Overall Survival

2:1 Randomization Introduced Greater Variability in Control Arm OS Curve

PRECEDENT PLD control survival is more than 4 months longer than historic



Overall Survival

Imbalance in PFI and Post-Trial Platinum Therapy May Have Confounded OS Results

% of Patients	ITT		FR(++)	
	EC145/PLD	PLD	EC145/PLD	PLD
≥ 3 months platinum free interval*	**56%**	**76%**	**57%**	**73%**
Received post-study chemotherapy	70%	71%	65%	80%
Platinum	18%	33%	**17%**	**27%**
Topotecan	34%	31%	44%	33%
Gemcitabine	27%	37%	22%	33%
Paclitaxel/Docetaxel	24%	29%	30%	40%
Bevacizumab	18%	14%	22%	20%

*** Last platinum dose to progression**

Overall Survival

OS Exploratory Analysis

Adjusting OS results based on PFS prognostic factors improve OS results particularly in FR(++) group

		Overall Survival Hazard Ratio	
Population (events by arm)	**N(1)**	**Unadjusted Analysis**	**Adjusted Analysis(2)**
ITT (events: 70/32)	149	1.099	0.928
FR(++) (events: 18/10)	38	**1.420**	**0.495**

1. **EC20 scan assessment available for 94 of 149 patients.**
2. **Results from Cox proportional hazards model with age, platinum failure, CA-125 level, geography, tumor size, months since last platinum treatment, and ECOG as baseline factors included in the model.**

Overall Survival Conclusions

- Underpowered, particularly in the control arm (49 patients)
- Control arm curve median is significantly longer than in historical PLD trials
- Imbalance in platinum free interval and post platinum therapy may have impacted results
- Results inconclusive

Implications for Phase 3 Study

- Validation of EC20 allows us to focus on FR(++) population
- Higher confidence that phase 2 results repeated in phase 3 study
- Primary endpoint of phase 3 on blinded investigator reads
- Include platinum free interval in stratification
- 1:1 Randomization

FR(++) Population	EC145/PLD	PLD
Investigator Assessment		
PFS Median (months)	5.5	1.5
PFS Hazard Ratio	0.381 (p=0.0134)	
IRC Assessment		
PFS Median (months)	4.0	1.5
PFS Hazard Ratio	0.465 (p=0.0498)	
Overall response rate[1]	17.4%	6.7%
Median OS (months)	14.0	16.4
OS Hazard ratio (unadjusted)	1.420	
OS Hazard ratio (adjusted) [2]	0.495	

1. **Response confirmed by follow-up CT scan.**
2. **Results from Cox proportional hazards model with age, platinum failure, CA-125 level, geography, tumor size, months since last platinum treatment, and ECOG as baseline factors included in the model.**

Questions & Answers