MILO/ENGOT-ov11: Binimetinib Versus Physician’s Choice Chemotherapy in Recurrent or Persistent Low-Grade Serous Carcinomas of the Ovary, Fallopian Tube, or Primary Peritoneum

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abstract

PURPOSE Low-grade serous ovarian carcinomas (LGSOCs) have historically low chemotherapy responses. Alterations affecting the MAPK pathway, most commonly KRAS/BRAF, are present in 30%-60% of LGSOCs. The purpose of this study was to evaluate binimetinib, a potent MEK1/2 inhibitor with demonstrated activity across multiple cancers, in LGSOC.

METHODS This was a 2:1 randomized study of binimetinib (45 mg twice daily) versus physician’s choice chemotherapy (PCC). Eligible patients had recurrent measurable LGSOC after ≥ 1 prior platinum-based chemotherapy but ≤ 3 prior chemotherapy lines. The primary end point was progression-free survival (PFS) by blinded independent central review (BICR); additional assessments included overall survival (OS), overall response rate (ORR), duration of response (DOR), clinical-benefit rate, biomarkers, and safety.

RESULTS A total of 303 patients were randomly assigned to an arm of the study at the time of interim analysis (January 20, 2016). Median PFS by BICR was 9.1 months (95% CI, 7.3 to 11.3) for binimetinib and 10.6 months (95% CI, 9.2 to 14.5) for PCC (hazard ratio, 1.21; 95% CI, 0.79 to 1.86), resulting in early study closure according to a prespecified futility boundary after 341 patients had enrolled. Secondary efficacy end points were similar in the two groups: ORR 16% (complete response [CR]/partial responses [PRs], 32) versus 13% (CR/PRs, 13); median DOR, 8.1 months (range, 0.03 to 12.0 months) versus 6.7 months (0.03 to 9.7 months); and median OS, 25.3 versus 20.8 months for binimetinib and PCC, respectively. Safety results were consistent with the known safety profile of binimetinib; the most common grade 3 event was increased blood creatine kinase level (26%). Post hoc analysis suggests a possible association between KRAS mutation and response to binimetinib. Results from an updated analysis (n = 341; January 2019) were consistent.

CONCLUSION Although the MEK Inhibitor in Low-Grade Serous Ovarian Cancer Study did not meet its primary end point, binimetinib showed activity in LGSOC across the efficacy end points evaluated. A higher response to chemotherapy than expected was observed and KRAS mutation might predict response to binimetinib.

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INTRODUCTION Serous carcinoma accounts for approximately 70%-80% of epithelial ovarian, tubal, and peritoneal cancers. Low-grade serous ovarian carcinoma (LGSOC) is a unique tumor that is distinguished from high-grade serous ovarian cancer not only by immunohistochemical profile but also by molecular characteristics, epidemiologic features and clinical behavior. Aberrant signaling through the RAS/RAF/MEK/ERK pathway is a characteristic feature of many cancers, including LGSOC, with 5%-16% and 16%-47% of LGSOCs having alterations in BRAF and RAS, respectively. Binimetinib is an oral, potent, selective, allosteric, small-molecule inhibitor of MEK1/2 and is approved in multiple countries in combination with encorafenib for the treatment of patients with unresectable or metastatic BRAF V600E or V600K mutation-positive melanoma. Inhibiting both basal and induced levels of ERK phosphorylation in numerous BRAF-mutated cancer cell
CONTEXT

Key Objective
The objective of the MEK Inhibitor in Low-Grade Serous Ovarian Cancer (MILO)/ENGOT-ov11 study was to evaluate the MEK1/2 inhibitor binimetinib in patients with low-grade serous ovarian carcinomas (LGSOCs).

Knowledge Generated
This study did not meet its primary end point; however, binimetinib showed activity in LGSOC across the efficacy end points evaluated. Chemotherapy responses were higher than predicted. The safety results observed in this study are generally consistent with the known safety profile of binimetinib and with MEK inhibitor class effects.

Relevance
Currently, treatment options are limited for patients with LGSOC, and few offer objective decreases in disease burden or tumor-progression delays. Although this trial did not meet its primary end point, binimetinib did display a clinically meaningful progression-free survival and overall response rate and, therefore, should be considered a viable treatment option in this setting. Forthcoming biomarker analysis may ultimately identify a subset of patients who selectively benefit from binimetinib.

PATIENTS AND METHODS

Patients
Patients were > 18 years of age with a diagnosis of LGSOC, fallopian tube or primary peritoneum, confirmed histologically and verified by central pathology review. Archival tissue was also collected for biomarker testing using the FoundationOne Panel (Foundation Medicine, Cambridge, MA). Eligible patients had measurable recurrent or persistent disease (as defined by RECIST V1.1, per BICR) that had progressed (defined as radiologic and/or clinical progression; an increase in CA-125 alone was not sufficient) on or after last therapy, and was not amenable to potentially curative intent surgery, as determined by the investigator. Patients were required to have received ≥ 1 prior platinum-based chemotherapy regimen but ≤ 3 prior chemotherapy regimens in total, with no limit to the number of lines of prior hormonal therapy. Patients had an Eastern Cooperative Oncology Group performance status of 0 or 1. Patients were excluded if they had previous treatment with an MEK or BRAF inhibitor. Additional details regarding inclusion and exclusion criteria are provided in the Data Supplement.

The study was approved by the institutional review board for each site. All clinical work was conducted in compliance with current Good Clinical Practices as referenced in the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use. All patients enrolled in the study provided written, informed consent prior to their participation.

Study Design and Treatments
The MEK Inhibitor in Low-Grade Serous Ovarian Cancer (MILO)/ARRAY-162-311/ENGOT-ov11 study was a multinational, randomized, two-arm, open-label, phase III study conducted at 102 sites in 20 countries (ClinicalTrials.gov identifier: NCT01849874; Appendix Table A1, online only). MILO was conducted in collaboration with European Network of Gynecologic Oncological Trial groups (ENGOT) according to the ENGOT Model C. Patients were stratified by their last platinum-free interval (≤ v > 182 days) and number of prior systemic regimens (1 to 2 v 3) and then randomly assigned 2:1 to receive binimetinib or physician’s choice chemotherapy (PCC; pegylated liposomal doxorubicin [PLD], paclitaxel, or topotecan). Patients randomly assigned to binimetinib received 45 mg orally twice daily with water irrespective of food, continuously, starting on day 1. Patients randomly assigned to PCC received one of the following: PLD (40 mg/m2 intravenously [IV] on day 1 of every 28-day cycle), paclitaxel (80 mg/m2 IV on days 1, 8, and 15 of every 28-day cycle), or topotecan (1.25 mg/m2 IV on days 1-5 of every 21-day cycle). Treatment continued until one of the following: locally determined progressive disease (PD) unacceptable toxicity, or inability to continue on protocol-directed therapy (additional information is
provided in the Data Supplement). Patients randomly assigned to PCC who developed PD (by local and BICR assessment) were allowed to crossover to treatment with binimetinib provided they met the crossover eligibility requirements (Data Supplement).

**Assessments**

The primary end point was BICR progression-free survival (PFS). Secondary end points included overall survival (OS), overall response rate (ORR; RECIST v1.1), duration of response (DOR), disease control rate (best response of...
complete response [CR] or partial response [PR], or stable disease [SD] documented ≥ week 24) and safety.

Tumors were assessed every 8 weeks for the first 72 weeks, then every 12 weeks until PD per BICR, irrespective of the days of study- drug administration. Safety was evaluated by ongoing monitoring, including ophthalmic examinations, dermatologic examinations, electrocardiograms, and cardiac scans of ejection fraction.

**Statistical Methods**

For efficacy, all randomly assigned patients were included in the analyses. For safety, all patients who received binimetinib or PCC were included. PFS was defined as the date of randomization to the date of first documented BICR PD or death due to any cause, whichever occurred first. If a patient had not experienced an event at the time of the analysis cutoff or at the start of any new therapy, PFS was censored at the date of last adequate tumor assessment. PFS and OS were summarized by treatment arm using the Kaplan-Meier method with 95% CIs for medians. The primary end point was compared between treatment arms using a stratified log-rank test, and a hazard ratio (HR) from the stratified log-rank test was used to summarize the treatment effect estimate.

**ORR** was assessed and compared between arms using the Fisher exact test. Median DOR with 95% CIs was provided, with minimum, maximum, and the number still in response (censored) at the time of data cutoff. A total of 195 events (PD or death) provided 90% power for testing the null hypothesis of no difference in PFS distribution functions between the two treatment arms assuming a true HR of 0.60 using a stratified log-rank test, a 1-tailed α of 0.025, and a 2:1 binimetinib arm to control arm randomization ratio. The HR required to achieve the final critical value was approximately 0.74. Historical evidence suggests that the median PFS in recurrent LGSOC is approximately 7 months.6,7 For exponential PFS, a HR of 0.60 translates to a median PFS of approximately 11.7 months in the binimetinib arm. A total of approximately 360 patients were planned. An interim analysis for early stopping for futility was planned at 40% information fraction (ie, n = 78 total progression events per BICR or deaths). The futility boundary was from the unified family of group sequential test designs with parameter P = 0.5.13 At 40% information fraction, this corresponds to an approximate boundary of 0.90 on the HR scale. A data cutoff date was set by the sponsor in advance of the occurrence of the 78th event. FoundationOne Panel genes that were prevalent in at least 5% of sequenced patients were tested for association with binary response (CR or PR v SD or PD) using two-sided Fisher exact tests.

**RESULTS**

**Patient Characteristics and Drug Exposure**

Patients were enrolled from June 28, 2013, to April 1, 2016. Per recommendation of the data monitoring committee, enrollment was discontinued after the planned interim analysis showed the HR for PFS crossed the pre-defined futility boundary. The interim analysis was conducted with 303 patients and then, at the time of the decision to discontinue enrollment for the study, 341 patients. Results presented here include an assessment of end points during the randomized period, up to the data cutoff date for the interim analysis of January 20, 2016, for a total of 303 patients (n = 201 patients receiving binimetinib; n = 102 receiving PCC) in the full analysis set and 294 patients (n = 200 receiving binimetinib; n = 94

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**TABLE 1.** Baseline Demographics and Disease Characteristics

| Characteristic                        | Binimetinib (n = 201) | PCC (n = 102) |
|---------------------------------------|-----------------------|---------------|
| Age, median (range), years            | 51.6 (23-79)          | 50.2 (22-78)  |
| Race                                  |                       |               |
| White                                 | 184 (92)              | 93 (91)       |
| Black or African American             | 2 (< 1)               | 3 (3)         |
| Asian                                 | 6 (3)                 | 2 (2)         |
| American Indian/Alaskan Native        | 0                     | 1 (< 1)       |
| Other                                 | 0                     | 1 (< 1)       |
| Missing                               | 9 (4)                 | 2 (2)         |
| Region                                |                       |               |
| United States/Canada                  | 84 (42)               | 45 (44)       |
| Australia                             | 6 (3)                 | 6 (6)         |
| Europe                                | 111 (55)              | 51 (50)       |
| ECOG PS 0                             | 124 (62)              | 66 (65)       |
| No. of prior systemic regimens        |                       |               |
| Median (range)                        | 2 (1-8)               | 2 (1-6)       |
| 1                                     | 86 (43)               | 42 (41)       |
| 2                                     | 60 (30)               | 30 (29)       |
| 3                                     | 34 (17)               | 22 (22)       |
| ≥ 4                                   | 21 (10)               | 8 (8)         |
| Prior treatment                       |                       |               |
| Radiation                             | 15 (7)                | 7 (7)         |
| Surgery                               | 201 (100)             | 102 (100)     |
| Hormonal therapy                      | 69 (34)               | 34 (33)       |
| Response to prior platinum-based therapy | 83 (46)            | 59 (58)       |
| Response to prior paclitaxel          | 61 (30)               | 43 (43)       |
| PCC*                                  |                       |               |
| Pegylated liposomal doxorubicin       | —                     | 64 (68)       |
| Paclitaxel                            | —                     | 25 (27)       |
| Topotecan                             | —                     | 5 (5)         |

**NOTE.** Data are reported as No. (%) unless otherwise indicated.

Abbreviations: —, characteristic is not relevant for the binimetinib arm; ECOG PS, Eastern Cooperative Oncology Group performance status; PCC, physician’s choice chemotherapy.

aData are from the Safety Set. All other data from the Full Analysis Set.
receiving PCC) in the safety population (Fig 1). At the time of data cutoff, (January 20, 2016), 107 patients (53%) and 48 patients (47%) had discontinued treatment of binimetinib and PCC, respectively. The most common reasons for discontinuing initial treatment were disease progression (binimetinib, 24%; PCC, 20%) and adverse events (binimetinib, 20%; PCC, 11%; Fig 1). Patient baseline demographics and disease characteristics were generally well balanced between the two groups (Table 1).

The median duration of exposure to binimetinib was 4.1 months (range, 0-24 months) and the median relative dose intensity was 67.6% (range, 6%-100%). The median duration of exposure to any of the PCC was 4.1 months (range, 0-18 months). Patients in the PCC group received PLD (n = 64 patients; 68%), paclitaxel (n = 25 patients; 27%), or topotecan (n = 5 patients; 5%). The median (range) relative dose intensity was 71.3% (40%-100%) for topotecan, 95.9% (0%-116%) for PLD, and 89.4% (33%-102%) for paclitaxel.

**Efficacy**

The primary end point of PFS by BICR is shown in Figure 2. The median PFS was 9.1 months (95% CI, 7.3 to 11.3) in the binimetinib group and 10.6 months (95% CI, 9.2 to 14.5) in the PCC group. The HR from the stratified Cox model was 1.21 (95% CI, 0.79 to 1.86). Based on a point-estimate futility boundary of HR > 0.84 for the 103 events observed in the interim analysis, the futility boundary was crossed, indicating a low probability of reaching statistical significance in favor of binimetinib with continued follow-up. In the local investigator assessment, patients in the binimetinib arm had a median PFS of 12.5 months (95% CI, 9.1 to 17.7) compared with 11.6 months (95% CI, 10.0 to 16.1) in the PCC group. The stratified HR was 0.87 (95% CI, 0.56 to 1.34).

The OS results are depicted in the Data Supplement. They were similar between groups, with 164 patients (82%) in the binimetinib group alive at the time of data cutoff for interim analysis compared with 82 patients (80%) in the PCC group. The median OS was 25.33 months (95% CI, 18.46 to not reached [NR]) in the binimetinib group and 20.83 months (95% CI, 17.45 to NR) in the PCC group. The HR from the stratified Cox model was 0.85 (95% CI, 0.49 to 1.48).

The response analysis is shown in Table 2. The ORR by BICR was 16% in the binimetinib group and 13% in the PCC group. The median DOR in the binimetinib group was 8.05 months (95% CI, 5.55 to NR) compared with 6.67 months (95% CI, 3.71 to NR) in the PCC group; 23 patients in the binimetinib group and 8 patients in the PCC group had responses ongoing at the data cutoff date. For the response assessment by local investigator, the ORR was 18% in the binimetinib group and 13% in the PCC group. Median DOR was 15.84 months (95% CI, 10.41 to NR) in the binimetinib group and 9.89 months (95% CI, 6.41 to 9.89) in the PCC group. A waterfall plot displaying percent change in sum of longest diameters per BICR is displayed in the Data Supplement.

At the time enrollment to the study ended in April 2016, patients being treated with binimetinib or PCC were notiﬁed of the interim results, but if desired, they were allowed to continue receiving treatment until treatment discontinuation criteria were met. Crossover was stopped at that time. An updated analysis was conducted when the remaining data were collected after the discontinuation of enrollment, with a data cutoff of January 2019 (n = 341).
analysis, median PFS by BICR was 10.4 months (95% CI, 7.5 to 12.9) in the binimetinib group and 11.5 months (95% CI, 9.9 to 14.8) in the PCC group (HR, 1.15; 95% CI, 0.76 to 1.74; Data Supplement). Median OS was 34.6 months (95% CI, 28.0 to NR) and 34.2 months (95% CI, 21.6 to NR) for the binimetinib and PCC groups, respectively (HR, 0.93; 95% CI, 0.65 to 1.33; Data Supplement). Updated ORR by local investigator assessment was 24% in both groups (Data Supplement). It is important to note the median OS estimates in both arms increased at the follow-up analysis, possibly as a result of the instability of the median estimates at the time of the initial analysis, when the potential follow-up was substantially (3 years) shorter.

Molecular testing was performed on all consenting patients with adequate archival tissue. At the time of the January
2019 data cutoff, 215 patients had tumor tests available. There were 47 mutations detected in at least 5% of patients, most commonly KRAS, which was found in 33% of patients. The frequency of KRAS mutation was evenly distributed between the two groups and was found in 46 patients (32%) treated with binimetinib and 24 patients (34%) treated with PCC. Unbiased univariate analyses evaluating best ORR to therapy as a binary response showed KRAS mutation was significantly associated with response to treatment with binimetinib (odds ratio [OR], 3.4; 95% CI, 1.53 to 7.66; unadjusted \(P = .003\); Fig 3A) but not PCC (OR, 2.13; 95% CI, 0.67 to 6.81; \(P = .2\); Fig 3B). KRAS mutation was also associated with prolonged PFS in patients treated with binimetinib (median PFS: KRAS mutant: 17.7 months [95% CI, 12 to NR]; KRAS wild-type [WT]: 10.8 months [95% CI, 5.5 to 16.7]; \(P = .006\)), but not PCC (median PFS: KRAS mutant: 14.6 months [95% CI, 9.4 to NA]; KRAS WT: 11.5 months [95% CI, 5.7 to 26.6]; \(P = .502\)). Among those patients treated with binimetinib for whom updated local RECIST 1.1 response data and molecular data were available \((n = 133)\), KRAS mutation status was significantly associated with local best response \((P = .004)\); 44% of patients with KRAS mutation versus 19% of patients with KRAS WT had CR or PR (Table 3).

Mutations identified by Foundation Medicine FoundationOne Panel in ≥ 1 tumor sample are listed in the Data Supplement.

**Safety**

Grade ≥ 3 adverse events were reported in 76% and 44% of patients for binimetinib and PCC, respectively (Table 4). Adverse events that led to permanent discontinuation of study drug were reported by 62 patients (31%) for binimetinib and 16 patients (17%) in the PCC group. Adverse events leading to binimetinib discontinuation in ≥ 5 patients were decreased ejection fraction \((n = 8\) patients; 4%), vomiting \((n = 6\) patients; 3%), intestinal obstruction and retinal vein occlusion \((n = 5\) patients; 2% each). The adverse event leading to discontinuation of PCC in ≥ 5 patients was palmar-plantar erythrodysesthesia syndrome \((n = 5\) patients; 5%). A total of six patients (3%) in the binimetinib group experienced a retinal vein occlusion event, all of which resulted in treatment discontinuation. All events were considered resolved or resolving, two with sequelae. No permanent blindness or permanent loss of vision was observed.

**DISCUSSION**

Binimetinib did not demonstrate a significant difference in the primary end point of PFS versus PCC in patients with recurrent or persistent LGSOC. In addition, the proportion of patients achieving an objective response and the median DOR appeared similar between arms. Of note, the responses to chemotherapy in this study were greater than anticipated on the basis of previously reported, single-institution retrospective case series.

Although the MILO/ENGOT-ov11 trial did not meet its primary end point, binimetinib did display a clinically
meaningful PFS and ORR and, therefore, should be considered a viable treatment option in this setting. The median OS for patients with advanced LGSOC approaches 10 years, with patients often experiencing significant morbidity from their disease during that time.2 Currently, treatment options are limited for patients with this disease and few offer objective decreases in disease burden or delays in tumor progression. Recent results from another phase II/III trial in 260 patients with recurrent LGSOC showed trametinib was associated with significantly improved PFS (median, 13.0 vs 7.2 months; HR, 0.48; 95% CI, 0.36 to 0.64; P < .0001) and ORR (trametinib: 26.2% vs control: 6.2%; OR, 5.4; 95% CI, 2.39 to 12.21; P < .0001) compared with physician’s choice standard of care, also indicating the potential of MEK inhibition in this patient population.14 Of note, the control arm in that study did not appear to perform as well as in the current study, possibly because of differences in inclusion criteria. The trametinib study allowed for an unlimited number of prior chemotherapy regimens, whereas the binimetinib study was limited to patients who had received a maximum of three prior lines of chemotherapy. Differences in study design and inclusion criteria likely selected for a more chemotherapy-resistant population in the trametinib study, explaining the similar activity of MEK inhibitors between the two studies (response rate of 24% on updated analysis of binimetinib study; 26.2% in the trametinib study) but difference in activity within the control arms. Safety results from this study show that patients treated with binimetinib had higher rates of nonserious and serious adverse events overall, as well as grade ≥ 3 adverse events compared with the PCC group, and there were more frequent dose reductions, dose interruptions, and permanent discontinuations due to adverse events experienced by patients in the binimetinib group, resulting in a lower relative dose intensity for the binimetinib group compared with any of the drugs in the PCC group. The majority of adverse events assessed as related to binimetinib were reversible with or without drug interruption. The safety profile observed in this study is consistent with the known binimetinib profile and consistent with those for the class of MEK inhibitors.15

There are several limitations of the study. First, the lack of suitable, validated biomarkers led to a design with an unselected patient population. Post hoc analysis suggests a possible association between KRAS mutation and response to binimetinib. Additional exploration is warranted to determine if patients with KRAS mutation may derive greater benefit from binimetinib. Although KRAS has been an elusive target across multiple cancer types, prior early-phase studies have found promising response rates to MEK inhibitors and MEK inhibitor combinations in those

### TABLE 4. Adverse Events Reported in > 20% of Treated Patients in Either Arm

| Eventa | Binimetinib (n = 200) | PCC (n = 94) |
|---------|-----------------------|-------------|
|         | Any Gradeb | ≥ Grade 3 | Any Grade | ≥ Grade 3 |
| Total no. of patients with any adverse eventc | 194 (97) | 151 (76) | 92 (98) | 41 (44) |
| Diarrhea | 141 (70) | 13 (6) | 30 (32) | 0 |
| Nausea | 110 (55) | 9 (4) | 43 (46) | |
| Vomiting | 107 (54) | 20 (10) | 23 (24) | 2 (2) |
| Blood creatinine phosphokinase increased | 99 (50) | 52 (26) | 1 (1) | 0 |
| Fatigue | 97 (48) | 7 (4) | 43 (46) | 4 (4) |
| Edema peripheral | 93 (46) | 1 (< 1) | 8 (9) | 0 |
| Dermatitis acneiform | 92 (46) | 12 (6) | 4 (4) | 0 |
| Abdominal pain | 63 (32) | 9 (4) | 21 (22) | 0 |
| Ejection fraction decreased | 57 (28) | 7 (4) | 10 (11) | 1 (1) |
| Dry skin | 56 (28) | 3 (2) | 14 (15) | 0 |
| Constipation | 52 (26) | 3 (2) | 25 (27) | 0 |
| Alopecia | 50 (25) | 0 | 25 (27) | 0 |
| Stomatitis | 46 (23) | 2 (< 1) | 27 (29) | 4 (4) |
| Decreased appetite | 45 (22) | 2 (< 1) | 17 (18) | 2 (2) |
| Rash, maculopapular | 45 (22) | 2 (< 1) | 16 (17) | 2 (2) |
| Palmar-plantar erythrodysesthesia syndrome | 9 (4) | 0 | 31 (33) | 5 (5) |

NOTE. Data are reported as No. (%) unless otherwise indicated. Abbreviation: PCC, physician’s choice chemotherapy.

aAny single patient may have experienced adverse events under multiple terms (ie, not mutually exclusive).
bGrade is based on National Cancer Institute Common Terminology Criteria for Adverse Events, version 4.03.
cReported using standard MEDRA dictionary coding.
patients with KRAS-mutant LGSOC. This has led to considerable interest in the use of mutation status when weighing the expected adverse effects versus benefits of MEK inhibitor therapy. Adverse events in the binimetinib group led to study discontinuations and a low dose intensity. The safety events noted in this study were resolved with conservative supportive care and could potentially be mitigated in future protocols with more proactive management.

In conclusion, although this study did not meet its primary end point, binimetinib showed activity in LGSOC across the efficacy end points evaluated. Chemotherapy responses were greater than predicted. The safety results observed in this study are generally consistent with the known safety profile of binimetinib and with MEK inhibitor class effects. Forthcoming biomarker analysis may ultimately identify a subset of patients who selectively benefit from binimetinib, and additional clinical evaluation is warranted.

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**EQUAL CONTRIBUTION**

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**CLINICAL TRIAL INFORMATION**

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**AUTHORS’ DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST AND DATA AVAILABILITY STATEMENT**

Disclosures provided by the authors and data availability statement (if applicable) are available with this article at DOI https://doi.org/10.1200/JCO.20.01164.

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| 2243    | Friederike Marme, PD Dr | Andreas Schneeweis, Prof Dr; Klaus Reinhendrich, Prof Dr | NCT National Centrum für Tumorberkrankungen Heidelberg Im Neuenheimer Feld 460, Heidelberg 69120, Germany |
| 2244    | Mignon Denise Keyver-Paik, Dr | Alina Abramian, Dr; Monika Fleckenstein, Dr; Nikolaus De Gregorio, Dr; Jens Hueber, Dr; Inga Beles, Dr; Amelie M. Schramm, Dr; Jessica Christine Salmen Fabienne Schochter, Dr; Lukas Schwenwedter, Dr; Wolfgang Jann, Prof Dr; Bernadette Jager, Dr | University of Bern, Department for Obstetrics and Gynaecology, Sigmund Freud-Str. 25, Bern 30105, Switzerland |
| 2245    | Beate Reutenberg, Dr med | Annette Herpen, Prof Dr; Daniel Behringer, Prof Dr | Universitätsklinik Freiburg Hugelstatter Straße 49 Freiburg, Baden-Württemberg 79106, Germany |
| 2096    | Tamás Pintér, Dr | Kati Agyemang-Prempeh, Dr; Istvan Sipocz, Dr; Peter Mezes, Dr; Norbert Pesztenlehrer, Dr | Patz Akadai Megyei Októrs Orvostudományi Intézet Vavayi P.ú. 2-4, Győr 9012, Hungary |
| 2098    | Imre Pete, Dr | Andrea Begam, Dr; Katalin Konay, Dr; Eva Bajko, Dr; Miklos Schneider, Dr; Illes Kovacs, Dr; Eva Vídeg, Dr | Onzagos Orvostudományi Intézet Nagynagysági Ósztály Ráth Gergely utca 7-9, Budapest 1122, Hungary |
| 2099    | Zsuzsanna Papai, Dr | Peter Ngy, Dr; Marta Siler, Dr; Neomi Nylicans, Dr; Gabor Vayl, Dr | Magyar Honvédség Egyesületi I Októrs Orvostudományi Osztály Podmaniczky u.111, Budapest 1062, Hungary |
| 2088    | Sandro Pignata, MD | Marilena Di Napoli, MD; Carmela Pisano, MD; Rosa Tambaro, MD; Carlo Loffredo, MD; Gaetano Facchini, MD; Marilena Di Napoli, MD; Carmela Pisano, MD; Rosa Tambaro, MD; Carlo Loffredo, MD | Istituto Nazionale Tumori di Napoli, "G. Pascale" Oncologia Medica Dipartimento Uro-Ginecologico, Via M. Semmola, 52 Napoli 80131, Italy |
| 2089    | Francesco Raspagliesi, MD | Stefano Leonardi, MD; Giuseppe Malarte, MD; Domenico Lorusso, MD; Francesco Maria Bandello, MD; Giuseppe Malarte, MD; Domenico Lorusso, MD; Francesco Maria Bandello, MD | Fondazione IROCS Istituto Nazionale dei Tumori–SC Oncologia Ginecologica Via Venezia 1, Milano 20133, Italy |
| 2086    | Giovanna Scambia, MD | Giada Amato, MD; Vanda Salutari, MD; Andrea Giudice, MD; Tommaso Salgarello, MD; Eleonora Pallavini, MD | Policlinico Agostino Gemelli – Dip del Centro di Oncologia Medica e Radioterapia dell’Adolescente L.go A. Gemelli, 8 Roma 00168, Italy |
| 2113    | Salvatore Siena, MD | Mario Giuseppe Menni, MD; Fabio Sangiulsets, MD; Schiavetti Maria, MD; Valerio Marino, MD; Elena Magri, MD; Maria Teresa Di Ivo, MD; Enrica Taroni, MD; Paolo Isapaduto, MD | Policlinico Agostino Gemelli – Dip del Centro di Oncologia Medica e Radioterapia dell’Adolescente L.go A. Gemelli, 8 Roma 00168, Italy |
| 2114    | Stefano Tamburi, MD | Laura Amadori, MD; Giovanni C antiqua, MD; Alessandro Gamboni, MD; Luca Brandi, MD; Claudia Cavara, MD; Valeria Fratini, MD; Daniela Turci, MD; Enrico Campadelli, MD; Maria Rosa Gentili, MD; Maria Teresa Di Ivo, MD; Enrica Taroni, MD; Paolo Isapaduto, MD; Laura Amadori, MD; Giovanni C antiqua, MD; Alessandro Gamboni, MD; Luca Brandi, MD; Claudia Cavara, MD; Valeria Fratini, MD; Daniela Turci, MD; Enrico Campadelli, MD; Maria Rosa Gentili, MD; Maria Teresa Di Ivo, MD; Enrica Taroni, MD; Paolo Isapaduto, MD; Laura Amadori, MD; Giovanni C antiqua, MD; Alessandro Gamboni, MD; Luca Brandi, MD; Claudia Cavara, MD; Valeria Fratini, MD; Daniela Turci, MD; Enrico Campadelli, MD; Maria Rosa Gentili, MD; Maria Teresa Di Ivo, MD; Enrica Taroni, MD; Paolo Isapaduto, MD | Ospedale Policlinico di Bologna – Dipartimento di Oncologia Medica, Piazza Ospedale Maggiore 3, Milano 20162, Italy |
| 2115    | Sabino De Placido, MD | Rosella Lauta, MD; Raffa Tramit, MD | Università degli Studi Federico II di Napoli Medica Dipartimento di Oncologia Medica e Chirurgia via Vittorio Emanuele 3, Napoli 80131, Italy |
| 2136    | Antonella Savarise, MD | Gianluigi Fanetti, MD; Paolo Malaguti, MD; Vito Farina, MD; Alessandra Fekl, MD | Istituto Nazionale Tumori Regina Elena – Oncologia Medica A Via Elio Chierici 53, Roma 00144, Italy |
| 2143    | Frontinis Benedett Panzi, MD | Claudia Marchetti, MD; Angela Musella, MD; Innocenza Patu, MD; Ilaria Sabatelli, MD; Marco Marcone, MD; Elisa Parmiani, MD; Elisa Parmiani, MD; Marco Marcone, MD; Elisa Parmiani, MD; Marco Marcone, MD; Elisa Parmiani, MD; Marco Marcone, MD | Policlinico Umberto I – Università Sapienza – Dipartimento di Scienze Oncologiche, Ostetriche e di Scienze Urologiche Via del Policlinico 155, Roma 0015, Italy |
| 2230    | Paolo Scarlo, MD | Giuseppe Scandurra, MD; Giuseppe Sofia, MD; Massimo Fichera, MD; Daniele Turci, MD; Enrico Campadelli, MD; Maria Rosa Gentili, MD; Maria Teresa Di Ivo, MD; Enrica Taroni, MD; Paolo Isapaduto, MD | Azienda Ospedaliera Carrarese – Dipartimento di Oncochirurgia via Vittorio Emanuele 3, Napoli 80131, Italy |
| 2211    | Claudio Zamagni, MD | Elena Barletti, MD; Alessandra Bernardi, MD; Nicoletta Cacciari, MD; Angela Fini, MD; Rosella Hakim, MD; Manuela Lenz, MD; Franco Minardi, MD; Simona Minchillo, MD; Daniela Rubino, MD; Antonio Candel, MD; Sara Quer, MD; Maria-Cristina Pernetti, MD; Maria-Isabella Quer, MD | SSD Oncologia Medica Adiastti Zamagni – Policlinico S. Orsola – Malpighi Viale Ercolani 2, Bologna 40138, Italy |

(continued on following page)
### TABLE A1.

| Site No. | Principal Investigator | Sub-Investigators | Other Key Personnel | Study Site |
|----------|------------------------|-------------------|--------------------|------------|
| 2104     | Cezary Szczylik, MD    | Lubomir Bodnar, MD | Lukasz Milewski, MD| Poland     |
| 2118     | Aleix Prat Aparicio, Dr| Laura Vidal Boixader, Dr | Ivan Victoria, Dr; Lydia Gaba, Dr; Maria Jose Capella Elizalde, Dr; Cecilia Orbegoso, Dr; Sonia Viver, Dr | Spain     |
| 2146     | Isabel Bover Barcelo, Dr| Neus Ferrer Tur, Dr; | Emeterio Orduna Domingo, Dr | Spain     |
| 2186     | Cristina Churruca Galaz, Dr | Nerea Ancizar Lizarraga, Dr; Ane Gibelalde Gonzalez, Dr; Isabel Alvarez Lopez, Dr; Ana Paisan Ruiz, Dr | Spain     |
| 2187     | Ferran Losa, Dr        | Alicia Garcia Arias, Dr | Ferran Losa Gaspard, Dr; Andres Bujan Rivas, Dr; Helena Verdaguer, Dr; Luis Anselm, Dr | Spain     |
| 2189     | Ignacio Romero Noguera, Dr | Andres Poveda, Dr; | Francisco Pendades San Valero, Dr | Spain     |
| 2190     | Maria Jesus Rubio Perez, Dr | Raquel Serrano Blanch, Dr; Mariano Rodriguez Maqueta, Dr | Spain     |
| 2191     | Carmen Esteban Esteban, Dr | J. Ignacio Chacon Lopez-Muniz, Dr; Rosa Maria Jimenez Escribano, Dr | Spain     |
| 2242     | Cesar Mendiola Fernandez, Dr | Luis Manso Sanchez, Dr; Tomas Pascual Martinez, Dr; Beatriz Sarmiento Torres, Dr | Spain     |
| 2243     | Eva Maria Guerra Alia, Dr | Elena Lopez Miranda, Dra; Alfredo Carrato Mena, Dr; Noelia Martinez Janez, Dr; Maria Luisa Garcia de Paredes, Dr; Esther Ciancas Fuentes, Dr | Spain     |
| 2420     | David Vicente Baz, Dr  | Teresa Garcia Manrique, Dr; Ana Maria Grueso, Dr; Antonio Jose Gomez, Dr | Spain     |
| 2195     | Bengt Tholander Antoula Koliadi, Dr | Anne von Heideman, Dr; Ann-Marie Lejon, Dr | Sweden    |
| 2204     | Elisabet Hjerpe Alexandra Hofsjo, Dr | Caroline Lundgren, Dr; Susanne Fridsten, Dr; Daria Glaessgen, Dr; Hanna Dahlstrand, Dr; Vriens, Dr; de Vos, Dr; Pleunis, Dr; Aaldering, Dr; Soetekouw, Dr | Sweden    |
| 2117     | R. Lalisang, Dr        | Tjan-Heijnen, Dr; Hoeben, Dr; Aarts, Dr; Jansen, Dr; de Boer, Dr; Van den Biggelaar, Dr; Van der Zanden, Dr; Monk et al | The Netherlands |
| 2145     | Anneke Westermann, Dr  | J. Wilmink, MD; R. Schlingemann, Prof., Dr; S. Krausz, Dr; J. Tromp, Dr; H. J. Klumpen, Dr; B. Flameling, Dr | The Netherlands |
| 2153     | Anna K.L. Reyners, Dr  | Mathilde Jalving, Dr; Corina Oldenhuis, Dr | The Netherlands |
| 2105     | Susana Banerjee, Dr    | Juan Martin Liberal, Dr; Tiana Kordbacheh, Dr; Anna-Maria Bielinska, Dr; Stefan Diem, Dr; Roger Whitelocke, Dr; Amna Sheri, Dr; Saoirse Oliva Dolly, Dr; Lavinia Eastwood, Dr; Aislinn Macklin-Doherty, Dr; Alexandros Georgiou, Dr; Alexander Lee, Dr; Nadia Yousaf, Dr; Joao Paulo Lima, Dr; Andrea Biondo, Dr; Michael Eric Gore, Dr; Paul G. Ursell, Dr; Benjamin Kasenda, Dr; Rita Canario, Dr; Angela George, Dr; Georgios Rigakos, Dr; Maria Vasilakopoulou, Dr; Lucy Dumas, Dr; Alison Reid, Dr; Margarita Romeo, Dr; Sophia Frentzas, Dr; Thubeena Manickavasagar, Naila Kaudeer, Dr; Michele Moschetta, Dr; Emily Grist, Dr; Gayathri Shankragall Anandappa, Dr; Michael Edward Davidson, Dr | United Kingdom |
| 2106     | Andrew Clamp, Dr       | Laura Horsley, Dr; Nerissa Mescallado, Dr; Gordon Jayson, Prof; Claire Mitchell, Dr; Jurjees Hasan, Dr; Paul Bishop, Prof; Tariq Aslam, Prof; Serena Salvatore, Dr | United Kingdom |
| 2105B    | Joao Paulo Lima, Dr    | Juan Martin Liberal, Dr; Rodger Whitelocke, Dr | United Kingdom |
| 2108     | Suuana Banerjee, Dr    | Laura Horsley, Dr; Neasa MacLachlan, Dr; Gordon Jayson, Prof; Sarah SOUTH, Dr; Joanne Harris, Dr; Phil Bryan, Dr; Adam Adam, Prof; Emma Skeates, Dr; Graham Ralfe, Dr | United Kingdom |
| 2109     | Andrew Clamp, Dr       | Laura Horsley, Dr; Neasa MacLachlan, Dr; Gordon Jayson, Prof; Sarah SOUTH, Dr; Joanne Harris, Dr; Phil Bryan, Dr; Adam Adam, Prof; Emma Skeates, Dr | United Kingdom |
| 2120     | Aruna Avki, Dr         | Shubhra Bardhan, Dr | United Kingdom |

(continued on following page)
| Site No. | Principal Investigator | Sub-Investigators and Other Key Personnel | Study Site |
|---------|------------------------|------------------------------------------|------------|
| 2154    | Hendrik-Tobias Arkenau, Dr | Mattilde Saggese, Dr; Joannis Brinas, Dr; Charlotte Lerchet, Dr; Mark Vasilevskiy, Dr; Rebecca Kriebelt, Dr.; Gabriel Mikl, Dr | Sarah Cannon Research Institute, 1001 Ridgewood Ln, Suite 100, Nashville, TN 37221, USA |
| 2436    | Jennifer Pascoe, Dr | None | Sandwell & West Birmingham Hospitals NHS Trust, City Hospital D46 Sheldon Block, Birmingham B18 7QH, United Kingdom |

United States

| Site No. | Principal Investigator | Sub-Investigators and Other Key Personnel | Study Site |
|---------|------------------------|------------------------------------------|------------|
| 1002    | Robert Coleman, MD | Diane Bodurka, MD; Michael Frumovitz, MD; David Gershenson, MD; Charles Levenback, MD; Karen H. Lu, MD; Ayla Niek MD; Pedro Ramirez, MD; Los Ramondetta, MD; Kathleen Schimert, MD; Pamela Sollman, MD; Anil Soodi, MD; Shannen Westin, MD; Dan Gumbs, PA-C; Lisa Cosman, PA; Shaila Kim, MD; Mike Schiffler, MD; Priya Bhosekar, MD; Preetha Ramalingam, MD | University of Texas MD Anderson Cancer Center, 1515 Holcombe Blvd, Unit 1362, Houston, TX 77030, USA |
| 1005    | Angela Jain, MD | Laniek Martin, MD; Stephanie King, MD; Robert Burger, MD; William Foster, MD; Naree Tedeschi-Gardano, MD; CRNP, Gina Mantha-Smallbone, MD | Fox Chase Cancer Center, 3331 Canada Ave, Philadelphia, PA 19111, USA |
| 1013    | Kian Behbakht, MD; formerly Susan Davidson, MD | Kian Behbakht, MD; Monique Spilman, MD; Saleeth Gunupalli, MD; Carolyn Leikows, MD | University of Colorado Denver, Anschutz Medical Campus, 12631 E 17th Ave, B1591, Room 4411, Aurora, CO 80045, USA |
| 1038    | Robert Thomas Morris, MD | Gunter Deppe, MD; Shelly Seward, MD; Leigh Ann Solomon, MD; Robert Frank, MD; Mark Juzich, MD; Gabriel Scime, MD; Andrew Tew, MD; Naranine Khra, PA-C; J. Winer, MD; PhD | Barbara Ann Karmanos Cancer Institute, 1400 John R. St., Suite 100, Detroit, MI 48201, USA |
| 1039    | Edward Sausville, MD | Guatam Rau, MD; Mareena Patronas, MD; Diana Raupe, MD; Bethany Danner, NP; Katherine Thaickud, MD | University of Maryland Greenebaum Cancer Center, 22 South Greene St, Baltimore, MD 21201, USA |
| 1040    | Robert Weinham, MD | Deonne Donnan, RN; Sachin Apte, MD; Hyttod Oden, MD; Patricia Judson, MD; Johnathan Lancaster, MD; M. Shahzadi, MD; Donna Fabri, ARNP; Sharon Tolin, ARNP; Marilyn Plattner, ARNP | H. Lee Moffitt Cancer Center and Research Institute, 12902 Magnolia Dr, Tampa, FL 33612, USA |
| 1800    | David Michael Morris, MD | David E. Coln, MD; Jeffrey M. Fowler, MD; Larry J. Copeland, MD; Floor J. Backes, MD; Ricardo Salani, MD; John L. Hayes, MD; Shelly G. Jain, MD; Thomas J. Hungerford, MD; Thomas F. Mauger, MD | Washington University School of Medicine, 4911 Barnes-Jewish Hospital Plaza, St Louis, MO 63110, USA |
| 1805    | Gottfried Korenyc, MD | Alexander C. Black, MD; Anita Kaul, MD; John Anthony Glapy, MD; John Barat, MD; Martin Olive Palmer, MD; Melissa Jill Cohen, MD; Olga Michelle Oleskey, MD; Rene Desai Caffahan, MD; Saved Sadeghy, MD; Sharynt Aouht, MD; Tara McCannel, MD; Denise Karen Oseguera, FNP; Colin McCannel, MD | University of California Los Angeles, Hematology-Oncology Clinic, UCLA Medical Plaza, Suite 550, Box 956970, Los Angeles, CA 956970, USA |
| 1822    | Peter Rose, MD | Chad McNeer, MD; Medhi Moslemi-Akia, MD; Robert De Bernardi, MD, John Schoen, MD, Richard N. S, MD | Cleveland Clinic/Marin Campus 9500 Euclid Ave, AB1, Cleveland, OH 44195, USA |
| 1889    | Rachel N. Grahon, MD | Card A. Aghajarian, MD; Katherine M. Bell, MD; Matthew L. Hendry, MD; MSc; David Hyman, MD; Jason A. Konner, MD; Vicky Maxek, MD; Robin E. O'Garthchail, MD; Bo B. Paul Sabatini, MD; David R. Spilgys, MD; William P. Tew, MD; Dimitri S. Zamarin, MD; Jessica Gabrels, PA; Stefanie S. Jacobs, MD; Robert A. Vergotz, MD, MHC; Matt Helm-Hiemenn, MD; Jasmine Frank, MD | Memorial Sloan Kettering Cancer Center, 30 East 66th St, New York, NY 10065, USA |
| 1875    | Michael S. Gordon, MD | David S. Mandelson, MD; Ronald Kato, MD; Gary H. Greene, MD | Oncology Research Associates, PLLC d/a Pinnacle Oncology Homecare, 9055 East Del Camino, Suite 100, Scottsdale, AZ 85258, USA |
| 1886    | Keith McKeon, MD | Arind Matel, MD; Alex Cohn, MD; Camilla Gunderson, MD; Lisa Lundrum, MD; Teresa Larson, MD; Robert S. Mervis, MD; B. Scott McEwen, MD; Katherine McEwen, MD; Michelle O'Connell, MD; Rachel Runlin, MD; Wase Shafi, MD; LeToya Perry, MD; Katrina Kait, MD; Adam Walker, MD; Joan L. Walker, MD | 800 NE 10th St, 8th Fl, Oklahoma City, OK 73104, USA |
| 1902    | Mark A. Reitermair, MD | John W. Browne, MD; Lisa N. Abad, MD; MPH; Alberto A. Mendil, MD; David White, MD; Katherine Kureyta, MD; Erin Timmerman, PA-C; Amber Palmer-Chapman, MD; Michelle Stone, PA-C; Crystal Gray, PA-C | Gynecological Oncology Associates, 353 Hospital Rd, Suite 507, Newport Beach, CA 92661, USA |
| 1903    | Agustin Garcia, MD; formerly Yvonne Lin-Liu, MD | Lynda Roman, MD; Hyun-Kim, MD; Laila Mutealapach, MD; Anna Yezzi, MD; Agustin Garcia, MD; Koji Matsuo, MD; Sinivas Sattin, MD; Kathrine Tiemeier, MD; Eijean Wu, MD; Laurie Brunette, PA-C; Wendy Watkins, RN; Grace Faux, RN; Shailam Benayou, MD; Jesse Berry, MD; Jocelyn Garcia, MD | USC/Norris Comprehensive Cancer Center, 1441 Euclid Ave, Rm. 7419, Los Angeles, CA 90033, USA |
| 1908    | Bradley Monk, MD; formerly John Farley, MD | John Farley, MD; Dana Chaves, MD; Lyndsay Willmott, MD; Stephanie Casey, MSN, AOCNP-BC; James M. Salamid, MD | St Joseph's Hospital & Medical Center, 500 W Thomas Rd, Suite 660, Phoenix, AZ 85013, USA |
| 1909    | Alessandro Santin, MD | Peter E. Schwartz, MD; Masoud Azodi, MD; Dan McClellan, MD; Elena Bader, MD; Stephanie Cantore, PA-C; Shirley McCarthy, MD; Ross A. Baker, MD; BS; Christine L. Kotler, MD; MPH; Daniel English, MD; Carlton Schwartz, MD; Martha Mitchell, APRN; Andrea Brennan, APRN | Yale School of Medicine, 333 Cedar St, New Haven, CT 06520, USA |
| 1914    | Maughan Tenney, MD | S. Diane Yama, MD; Jeffrey Nichols, MD; Ernst Robert Lengyel, MD, PhD; Giri Fleming, MD; Juliana Lutz, APRN; Constance Stewart, BN; Julie A. Sharpe, PA-C | University of Chicago Medical Center, 5841 S Maryland Ave MC0050, Chicago, IL 60637, USA |

(continued on following page)
| Study Site | Site No. | Principal Investigator | Sub-Investigators and Other Key Personnel | Study Site |
|------------|----------|------------------------|------------------------------------------|------------|
| New Mexico Cancer Care Alliance, 1201 Camino de Salud NE Admin Wing, 2nd Fl, Albuquerque, NM 87106 | 1915 | Carolyn Muller, MD | Teresa Rutledge, MD; Sarah Adams, MD; Frank J. Mares, MD; Barbara C. Marsh, PhD, MD; Michael L. DiMonaco, DO | |
| Department of Obstetrics and Gynecology Magee-Womens Hospital of UPMC, 300 Halket St, Pittsburgh, PA 15213 | 1923 | Alexander Olawaiye, MD; formerly Robert Edwards, MD | John Comerci, MD; Robert Edwards, MD; Alexander Olawiye, MD; Paniti Sukmvanich, MD; Joseph Kelley, MD; Madeleine Courtney-Brooks, MD; Marilyn Huang, MD; Andrew Eller, MD; Denise Gallagher, MD; Joseph Martel, MD | |
| Billings Clinic, 801 N 29th St, Billings, MT 59101 | 1924 | Randall Gibb, MD | James Cometet, MD; Caroline Deigert, PA; Doreen Kenneth, PA; Erin E. Stevens, MD | |
| Florida Hospital Cancer Institute Gynecologic Oncology, 2501 N Orange Ave, Suite 800, Orlando, FL 32804 | 1927 | Robert W. Holloway, MD | Glenn E. Bigsby, IV, DO; James E. Kendrick, IV, MD; David B. Auerback, DO; Lorna Brudie, DO; Victory B. Thomas, MD | |
| Florida Hospital Cancer Institute Gynecologic Oncology, 2501 N Orange Ave, Suite 800, Orlando, FL 32804 | 1928 | Gloria S. Huang, MD | Gary L. Goldberg, MD; Mark H. Einstein, MD, MS; Denis Yi-Shin Kuo, MD; Harriet Smith, MD; David Smotkin, MD; June YiJuan Hou, MD; Merieme Klobocista, MD; Rebecca Phaeton, MD; David C. Gritz, MD | |
| Monte fiore Medical Center, 1695 Eastchester Rd, Suite 601, Bronx, NY 10461 | 1929 | Jayanthi S. Lea, MD, FACOG | Isabel Villalobos, MS; David S. Miller, MD; Debra L. Richardson, MD; Siobhan M. Kehoe, MD; Ken Y. Lin, MD, PhD; Dustin B. Manders, MD; Christa I. Nagel, MD; Yu-Guang He, MD; Rafael Ufret-Vincenty, MD | |
| University of Texas Southwestern Medical Center, 5323 Harry Hines Blvd, E6. 102 Dallas, TX 75390-9032 | 1932 | Michael Goodheart, MD | David Bender, MD; Priyal Dholakiya, MD; Jesus Gonzalez-Bosquet Erin Salinas, MD; Jean-Marie Stephan, MD; Chelsea Ward, MD; Anna S. Kitzmann, MD; Khadija S. Shahid, OD | |
| University of Iowa Hospital and Clinics, 200 Hawkins Dr, 31506 PFP, Iowa City, IA 52242 | 2015 | Daniel Spitz, MD | Deidra A. Brown-Brinson, ARNP; Todd Adam Gersten, MD; Robert Jeffrey Green, MD; James Noel Harris, MD; Robert Julian Jacobson, MD; Elisabeth Anne McKeen, MD; Shachar Peles, MD; Ruby W. Pontello, ARNP; Marilyn Meeks Raymond, MD; Neal Evan Rothschild, MD; Augustin J. Schwartz III, MD; Avram Jonathan Smukler, MD; Robin A. Stehlin Stevens, ARNP; Sumithra Vattigunta, MD | |
| Georgia Regents University Cancer Center, 1120 15th St, BA-7411, Augusta, GA 30912 | 2115 | Sharad Ghamande, MD | Michael Macfee, MD; Bunja Rungruang, MD; Julia Donovan, MD; Anne Smith, APRN | |
| Massachusetts General Hospital Cancer Center, 1200 Soldiers Field Road, Boston, MA 02132 | 2120 | Michael Birrer, MD, PhD | MGH: Cesar M. Castro, MD; Marcela G. del Carmen, MD, MPH; Don S. Dizon, MD; Annekathryn Goodman, MD; Whitfield B. Growdon, MD; Carolyn N. Krasner, MD; Richard T. Penson, MD; John O. Schorge, MD; Tina Atkinson, RN, CCRC; Mary Campbell, NP, DFCI; Joyce Liu, MD; Christin Hurley-Whalen, RN; Stephanie Morrissey, RN; Victoria Patterson, RN; Lisa Arvine, NP; Suzanne Berlin, DO; Susana Campos, MD; Anne-Marie Wilson, NP; Alexi Wright, MD; Ann Stewart, NP; Colleen Chin, RN, BSN; Ursula Matulonis, MD. | |
| University of Cincinnati Physicians Company, 200 Albert Sabin Way, Holmes Hospital Bldg, Rm 4027, Cincinnati, OH 45267-0457 | 2050 | Eric L. Eisenhauer, MD | Thomas Reid, MD; Heather Pulaski, MD; W. Michael Gaynier, DO; Amanda Jackson, MD; Thomas Herzog, MD | |
| University of Virginia, Department of OB/GYN, GYN/ONC 81 Hospital Dr, Private Clinics 3rd Fl, Rm 3619, Charlottesville, VA 22908 | 2069 | Leigh Cantrell, MD | Yevgeniy Shildkrot, MD; Susan Modesitt, MD; Linda Duska, MD; Charles Landen, MD; Tyson West, MD | |
| University of California, Irvine-Medical Center, 101 The City Dr South, Bldg 56, Suite 800, Orange, CA 92868 | 2072 | Leslie Randall, MD | Krishnansu Tewari, MD; Fong Liu, MD; Philip DiSaia, MD; Gareth Forde, MD; Michael Berman, MD; Lauren Ingraffia, MD; Andrew T. Rubin, MD; Rachel A. Krasnow, MD; Linda M. Amstutz, MD; Carol B. Barrier, MD; Michael Callahan, MD; Hubert Fornalik, MD; Georgiann Linnemeir, MD; Ramana S. Moorthy, MD; Rodney S. Bucher, MD; Susan M. Rivers, RN; Rachele A. Willett, RN; Laura Erin Long, PA-C; Nicole L. Flanders, PA-C | |
| University of California, Irvine-Medical Center, 101 The City Dr South, Bldg 56, Suite 800, Orange, CA 92868 | 2179 | Michael Callahan, MD; formerly Gregory Sutton, MD | Michael Callahan, MD; Hubert Fornalik, MD; Georgiann Linnemeir, MD; Ramana S. Moorthy, MD; Rodney S. Bucher, MD; Susan M. Rivers, RN; Rachele A. Willett, RN; Laura Erin Long, PA-C; Nicole L. Flanders, PA-C |