Protocol Title: Phase II Study of Perfusion CT to Predict Progression-Free Survival and Response Rate in Bevacizumab Treatment of Platinum-Resistant Persistent or Recurrent Epithelial Ovarian, Fallopian Tube, or Peritoneal Carcinoma

Target Population: Platinum-Resistant Recurrent Ovarian, Fallopian Tube, or Primary Peritoneal Cancer

Summary: This phase II trial studies how well computed tomography perfusion imaging works in predicting outcomes in patients with ovarian, fallopian tube, or primary peritoneal cancer who are receiving bevacizumab. Computed tomography perfusion imaging monitors the effects of the drug treatment on the blood flow to the tumor and may help to predict whether a certain drug therapy is likely be successful in a patient with ovarian, fallopian tube, or primary peritoneal cancer.

REGISTRATION TO STEP 0:
- Must have epithelial ovarian, fallopian tube, or primary peritoneal cancer
  - Non-epithelial tumors or tumors with low malignant potential are excluded
- Must have suspected platinum-resistant disease (disease progression ≤ 6 months of platinum therapy)
- Must be expected to undergo therapy with bevacizumab in combination with paclitaxel, pegylated liposomal doxorubicin (PLD), or topotecan at recommended standard of care doses if suspected recurrence is confirmed with imaging
- Must be able and willing to provide written informed consent
- Must have a life expectancy of ≥ 3 months
- Must have adequate bone marrow, coagulation, renal, and hepatic function
- Must demonstrate an ECOG Performance Status of 0-2
- Must not have undergone therapy with any anti-VEGF drug within previous 6 months
- Must not have undergone major surgery or radiotherapy to the pelvis or abdomen within previous 4 weeks
- Must not have known contraindications to bevacizumab, including but not limited to abdominal fistula, gastrointestinal perforation, intra-abdominal abscess, thrombotic or hemorrhagic disorders, uncontrolled hypertension or active clinically significant cardiovascular disease, non-healing wound, ulcer, or bone fracture within previous 4 weeks
- Must not have untreated or symptomatic CNS metastasis
- Must not have another active (within past 3 years) or concurrent malignancy
- Must not have contraindication to iodinated contrast

REGISTRATION TO STEP 1:
- Must be evaluable using RECIST 1.1 criteria
- Patient must have perfusion CT target lesion (e.g., ≥ 1 cm in both the long and short axis, at least one half of the tumor appears enhancing and solid on a contrast-enhanced scan or has an attenuation of ≥ 10 Hounsfield unit [HU] on the unenhanced CT scan) on a contrast-enhanced conventional CT
- Conventional chest abdomen and pelvis CT images demonstrating recurrent tumor must be submitted within 21 days from acquisition to the American College of Radiology (ACR) Core Lab
- Eligibility of a perfusion CT target lesion must be confirmed by the ACR Core Lab prior to study enrollment and the T0 perfusion CT scan

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For additional information: [https://clinicaltrials.gov/ct2/show/NCT03412630](https://clinicaltrials.gov/ct2/show/NCT03412630)