**Supplementary Text**

**Pharmacokinetic Analytical Methods**

On d1, oxaliplatin 75 mg/m2 was administered alone as a 1 hour(h) IV infusion in all patients. All blood samples consisted of 5 mL using a tube containing sodium heparin obtained from an IV access site that was not used for drug administration. On d1, blood samples were obtained prior to and 30 minutes after the start of the infusion, prior to the end of the infusion, and 30 minutes, 1 h, 2 h, 4 h, 6 h, and 24 h after the end of the oxaliplatin IV infusion. Samples were transferred to labelled pre-cooled tubes, stored at -80°C and sent on dry ice for analytical studies.

On d2, docetaxel was administered IP via gravity with infusion time noted. Blood and peritoneal fluid samples (5 mL using sodium heparin tube) were obtained prior to administration, 0.5 and 1 h after the start of the IP infusion, and at 1 h, 2 h, 4 h, 6 h, 24 h, 48 h, and 72 h after the end of the IP infusion. Prior to obtaining all IP fluid samples, the IP port was flushed with 10 mL of D5W. Samples were transferred to labelled pre-cooled tubes, stored at -80°C and sent on dry ice for analytical studies.

**Analytic Methods**

*Oxaliplatin*

Oxaliplatin unbound and total (unbound plus bound) samples in plasma were analyzed. A 100 µL of plasma was processed by adding 100 µL of 200 ng/mL iridium (internal standard) in 70% HNO3. Samples were heated in a thermoreactor at 100°C for 1.5 hours. 1800 µL millipore double distilled water was added following heating. Plasma samples were filtered in centrifugal filter units with a 30,000 molecular weight cut-off to obtain ultrafiltrate before processing. Total and ultrafiltrate (unbound) platinum were measured in plasma via inductively coupled plasma mass spectrometry (ICP-MS) [9-10].

*Docetaxel*

Docetaxel samples were analyzed via liquid chromatography/tandem mass spectrometry (LC-MS/MS). Docetaxel was extracted from 50 mL of plasma or IP fluid by protein precipitation with 200 µL acetonitrile containing 20 ng/mL paclitaxel (internal standard). Samples were vortexed for 5 minutes, centrifuged at 3,000 x g for 10 minutes at 4°C and evaporated to dryness under nitrogen. Each sample was reconstituted in 50 µL methanol/0.1% formic acid and transferred to a glass 96-well plate insert containing 50 µL ddH2O. 10 µL of sample injected for LC-MS/MS analysis. Docetaxel and paclitaxel were separated on a Waters XSelect CSH Phenyl-Hexyl column (2.1 x 50 mm, 130 Å pore size, 5 mm particle size) using a gradient mobile phase consisting of 0.1% formic acid in water (mobile phase A) and 0.1% formic acid and 10% isopropanol in acetonitrile (mobile phase B) on a Shimadzu LC-20AD liquid chomatograph. The flow rate was 0.33 mL/min and the total run time was 6 minutes. The compounds were measured using a Thermo TSQ Ultra triple quadrupole mass spectrometer equipped with a heated electrospray ionization source in the positive ion mode. The discharge current was held at 3.7 kV and the vaporizer temperature at 225°C. Docetaxel and paclitaxel were detected by selected-reaction monitoring (SRM) using the transitions 808 -> 527 and 854 -> 286, respectively. Calibration curves were fit using linear regression with 1/X2 weighting in Xcalibur® v. 2.0 (Thermo Fisher Scientific, Waltham, MA) [11-12].

**Pharmacokinetic Analysis**

*Oxaliplatin*

Noncompartmental pharmacokinetic analysis was performed using WinNonlin Software version 5.2.1 (Pharsight Corp., Mountain View, CA) on both total and ultrafiltrate platinum (Pt) concentration versus time curves in plasma. Area under the plasma concentratin versus time curves (AUC) from 0 to infinity (AUC0-∞), maximum plasma concentration (Cmax) and systemic plasma clearance (CL), volume of distribution (Vd) and half-life (T1/2) were estimated using standard methods.

*Docetaxel*

Noncompartmental pharmacokinetic analysis was performed using WinNonlin Software version 5.2.1 (Pharsight Corp., Mountain View, CA) on docetaxel concentration versus time curves in plasma and IP fluid. The AUC0-last and Cmax were estimated using standard methods. The pharmacologic advantage after IP administration of docetaxel was calculated as the ratio of AUC in IP fluid to AUC in plasma and Cmax in IP fluid to Cmax in plasma [11].