failed left sided cannulation, the PPV was 90%. In our analysis, the AV/IVC ratio could accurately predict unilateral PA to make clinical decisions.

Our results agree with Wang et al who utilized the AV/IVC index and found the PPV of detecting UD to be 70%. Strajina et al found no difference in PPV between models comparing failed left and right AVS.

Abstract No. 400

Comparison of pancreatic tissue uptake of oxaliplatin delivered by systemic circulation and by pancreatic retrograde venous infusion (PRVI)

D. Jaroch[1], J. Guo[2], J. LaPorte[3], R. Parise[4], D. Griffin[5], B. Cox[1], J. Beumer[6], A. Arepally[7], S. Katz[8]; [1]Trisalus Life Sciences; [2]University of Pittsburgh; [3]Immuno-oncology Institute, Roger Williams Medical Center; [4]Cancer Pharmacokinetics & Pharmacodynamics, UPMC Hillman Cancer Center; [5]Radiology Imaging Associates; [6]University of Pittsburgh Cancer Institute; [7]Department of Radiology, Piedmont Atlanta Hospital. Formerly TriSalus Life Sciences; [8]TriSalus Life Sciences, Immuno-Oncology Institute, Roger Williams Medical Center, Department of Surgery, Boston University Medical Center

Purpose: Advanced pancreatic ductal adenocarcinoma (PDAC) responds poorly to conventional delivery of chemotherapeutic agents, with a 5-year survival rate of only 10%.[1] PDAC tends to elicit a dense desmoplastic reaction which restricts blood flow and absorption of therapeutics. This study describes the development of a trans-venous approach for regional treatment of pancreatic tumors, called pancreatic retrograde venous infusion (PRVI), using a catheter capable of modulating pressure and flow within the organ to promote drug uptake.

Materials and Methods: The study was conducted on normal female swine (44-63kg, mean surface area 0.994 m^2). Six (n=6) animals received PRVI of oxaliplatin solution (50mg, 10 mL volume). A percutaneous transhepatic approach was utilized to gain access to the pancreatic venous systems. A novel infusion system (TIS-21120-60, TriSalus Life Sciences) was employed to infuse oxaliplatin into the pancreas. Systemic administration of oxaliplatin was conducted at a high dose (n=5, 130mg) and low dose (n=2, 50 mg). Oxaliplatin concentration within tissue and plasma were quantified by ICP-MS.

Results: PRVI of oxaliplatin (50mg) significantly increased oxaliplatin concentration within the target infusion zone relative to adjacent regions of the pancreas (Infusion Zone: 2,721 (±447) ng Pt/g vs. Non-Target Zone 1: 174 (±110) ng Pt/g (P=0.001) and Non-Target Zone 2: 280 (±135) ng Pt/g (P=0.002)). PRVI of oxaliplatin also produced tissue concentrations significantly higher than that observed using systemic delivery (130mg), 2,721±447ng Pt/g vs. 1,225±295 ng Pt/g, P=0.012. Lipase levels increased significantly immediately after placement of the device (P=0.001), but subsequently decreased over a 60 min collection period. No significant shift in amylase levels was observed (P >0.05). Tissue pathology displayed little evidence (score 0-1) of inflammation, necrosis, apoptosis, or degranulation. Moderate capillary hemorrhage (score 3) was seen in one animal.

Conclusion: PRVI infusion resulted in a more than 2-fold increase in oxaliplatin concentration in the target zone within the pancreas while producing a 4-fold reduction in chemotherapy exposure to non-target regions of the organ relative to the high dose systemic reference. Overall systemic exposure to the chemotherapy agent was reduced by 61.5% in PRVI relative to the high dose reference. While healthy normal swine were employed in this pilot study, PRVI methodology demonstrated a high level of selectivity and significantly improved delivery efficiency of oxaliplatin.

The abstract numbers jump from 400 to 500 deliberately to reflect the change in section.