

[ABSTRACTS SELECTED FOR POSTER PRESENTATIONS](#)

[Pancreatic Cancer](#)

abstr 0913

**Long-Term Survival in Metastatic Pancreatic Adenocarcinoma and Cholangiocarcinoma Can Be Achieved With “Metronomic Dosing” of Paclitaxel/Oxaliplatin/Leucovorin/5-Fluorouracil (POLF) and Possibly Other Chemotherapy Regimens**

**Ben M. Chue**

Seattle Cancer Treatment and Wellness Center and the University of Washington School of Medicine, Seattle, WA

**Background:** Patients with metastatic pancreatic adenocarcinoma (PC) and cholangiocarcinoma (CC) have a poor prognosis, with median survivals of 3 to 6 months and poor quality of life. A weekly, “metronomic dosing” of chemotherapy allows for increased dose density and dose intensity, but with good tolerability, and can have anti-angiogenic effects. The anti-angiogenic agent bevacizumab blocks angiogenesis, normalizing vasculature, decreases interstitial tumor pressure, and allows for more chemotherapy to reach the tumor bed. Weekly paclitaxel may do the same, allowing for a smaller amount of chemotherapy, which causes fewer systemic side effects, to have better efficacy. We now report updated data with 30 patients with PC or CC who received at least 11 weeks of POLF chemotherapy; some patients also received paclitaxel/gemcitabine (PaG) and paclitaxel/irinotecan (PIC).

**Methods:** Thirty (30) patients, 35 to 81 years old, with metastatic biopsy-proven PC (n=28) or CC (n=2) were treated with weekly POLF (paclitaxel [P]: 60 mg/m<sup>2</sup>, oxaliplatin [O]: 50 mg/m<sup>2</sup>, leucovorin [L]: 20 mg/m<sup>2</sup>, 5-FU [F]: 425 mg/m<sup>2</sup>) for at least 11 weeks, with one switched to Abraxane (protein-bound paclitaxel) because of a reaction to paclitaxel. Twenty-six (26) received at least one gemcitabine-based regimen, 14 had two or more different previous treatments. One patient (A.B.) also received intermittent cetuximab, and two patients (M.C., Ju.S.) also received erlotinib. Glutathione, calcium, and magnesium were used to prevent oxaliplatin-related neuropathy. Glutamine was taken to prevent paclitaxel-related neuropathy. Fourteen (14) patients also received at least 8 weeks of PaG (P: 60 mg/m<sup>2</sup>; G: 800-1000 mg/m<sup>2</sup>), of whom seven (7) subsequently received at least 8 weeks of PIC (P: 60 mg/m<sup>2</sup>; I: 60-100 mg/m<sup>2</sup>, with either cisplatin 20 mg/m<sup>2</sup>, oxaliplatin 50 mg/m<sup>2</sup>, or mitomycin C 4 mg/m<sup>2</sup>)

International Society of Gastrointestinal Oncology  
2009 Gastrointestinal Oncology Conference  
October 1–3, 2009

**ABSTRACTS SELECTED FOR POSTER PRESENTATIONS**

**Results:** Median survivals after diagnosis and after POLF were 15.0 and 10.2 months, respectively. Survival at 12, 18, 24, and 30 months are 19 patients (63%), 12 (40%), 9 (30%) and 7 (23%). In 14 patients who also received PaG, median survival was 23.8 months (vs. 11.4 mo in 16 patients who did not receive PaG). For the 7/14 who also received PIC, 4/7 have survived more than 30 months. One patient (A.B.) was severely debilitated, with Eastern Cooperative Oncology Group (ECOG) status of 4, following progression of disease after two previous lines of CT, but is living 5 years since diagnosis, with ECOG 0. Two patients (L.C., D.P.) had bilirubin level of 27 and 9.6, both of which normalized with treatment without need for stent placement. One patient had a small bowel obstruction, ECOG 4, but became unobstructed with treatment. One patient also had a concurrent primary lung cancer, atrial fibrillation, and severe emphysema. The POLF regimen was well tolerated with two grade 3 neurotoxicity, two grade 3 diarrhea, and two grade 3 nausea/vomiting.

**Conclusions:** Weekly metronomic dosing of POLF has excellent activity against metastatic PC/CC, even in previously treated patients, with manageable side effects. A phase II study of POLF is open to enrollment, although accrual has been slow. Weekly metronomic dosing of other chemotherapy agents, such as PaG and PIC, may also be effective, and may contribute to long-term survival for patients with this disease. A strategy of sequential metronomic chemotherapy treatments may be useful in the neoadjuvant setting for tumor shrinkage to bring more patients to surgery for potential cure, in the adjuvant setting after potential curative surgery to improve cure rates, or in the metastatic disease setting to extend survival. We encourage clinical trials to investigate these exciting possibilities.

**Patient Data as of 8/31/09**

Patient	Gender	Age	Tumor Sites	Prior Chemotherapy	CA 19-9		Survival (Months)		Clinical Response
					Before POLF	After 12 Weeks	Since Diagnosis	Since POLF Treatment	
A.B.	Male	35	Body of pancreas, liver	1)Gemcitabine+ Capecitabine 2)Gemcitabine+ Docetaxel	489	18	60.1+	54.0+	PR
C.O.	Female	65	Head of pancreas, liver	1)Gemcitabine+ Cisplatin+ Erlotinib 2)S1	1088	135	39.6+	36.0+	PR
S.H.	Female	65	Head of pancreas, supraclavicular LN, lungs	1)Paclitaxel+ Gemcitabine 2)Erlotinib	10	10	34.6+	28.3+	PR
GL.S.#	Female	49	Liver, lungs, bone	1) Capecitabine + Gemcitabine 2) Irinotecan + Gemcitabine	54	17	34.5	21.4	PD

**International Society of Gastrointestinal Oncology  
2009 Gastrointestinal Oncology Conference  
October 1–3, 2009**

**ABSTRACTS SELECTED FOR POSTER PRESENTATIONS**

V.S.	Male	65	Head of pancreas, lungs, retroperitoneal LN	1)Gemcitabine+ Capecitabine	1,730	14	32.9	26.9	SD
F.T.	Female	44	Head of pancreas, liver	1)Gemcitabine+ Docetaxel+ Erlotinib 2)Gemcitabine+ Capecitabine	3378	326	32.6	17.9	PR
L.C.	Female	43	Neck of pancreas, lungs, retroperitoneal and supraclavicular LN.	None	8,893	326	31.9	30.6	MR/PR
J.N.	Male	52	Head of pancreas, liver, lungs	1)Gemcitabine+Mitomycin+Capecitabine 2)Paclitaxel+Gemcitabine	-	-	29.5	24.4	SD
Ju.S.	Female	69	Tail of pancreas, liver	1)Gemcitabine+ Docetaxel+ Capecitabine 2)Paclitaxel + Gemcitabine	8	-	27.5+	21.9+	PR
I.S.	Female	53	Body & tail of pancreas, liver	1)Gemcitabine 2)Capecitabine	124,692	23,131	22.5	10.4	MR/PR
H.N.	Male	74	Tail of pancreas, liver	1)Paclitaxel+ Gemcitabine	5,320	11,734	19.3	6.3	PD
M.C.	Male	53	Head of pancreas, colon, mesenteric LN, liver	1)Capecitabine+ Gemcitabine+ XRT 2)Paclitaxel+ Gemcitabine	8	6	18.3	14.8	PR
B.P.	Male	65	Neck of pancreas, liver	1)Mitomycin C+ 5-FU+ Cisplatin 2)Gemcitabine	3,453	1,445	17.4	11.3	MR
Jo.S.#	Female	81	Liver, periaortic LN	1) Gemcitabine + Paclitaxel	-	-	17.2	12.0	SD
N.C.	Male	71	Head of pancreas, lungs	1)5-FU+XRT 2)Capecitabine 3)Gemcitabine+ Docetaxel+ Capecitabine	393	2066	15	6.9	PD
W.S.	Male	66	Head of pancreas, liver, periaortic LN.	None	112	66	15.0	12.3	Mixed
B.E.	Female	54	Head of pancreas, liver	1)Docetaxel+ Gemcitabine 2)5-FU+XRT	92	47	13.6	9.9	PR
D.B.	Male	75	Head of pancreas, periaortic LN, hilar LN, bones	1)Paclitaxel+ Gemcitabine 2) Erlotinib	345,385	164,329	13.3	7.5	MR
D.P.	Male	55	Head of pancreas, liver	1)Gemcitabine+ Cisplatin	9,015	53	12.0	10.6	PR
T.W.	Female	49	Tail of pancreas, liver	1)Paclitaxel+ Gemcitabine	1,760	691	11.9	5.5	SD
B.M.	Female	59	Head and tail of pancreas, stomach, mesocolon, and liver	1)Paclitaxel+ Gemcitabine 2)Docetaxel+ Gemcitabine	17	10	11.5	6.6	Mixed / SD
P.L.	Female	56	Tail of pancreas, liver, lung	1)Gemcitabine+ Oxaliplatin+ Erlotinib	47,446	69	10.7	7.4	PR
K.D.	Female	65	Head of pancreas, liver	1)Gemcitabine	2,027	4,569	10.2	5.8	PD
J.C.	Male	47	Tail of pancreas, liver	1)Paclitaxel+ Gemcitabine	154	1,237	10.0	6.0	SD
G.L.	Female	75	Head of	1)Capecitabine	3,594	302	7.9	6.2	MR

**International Society of Gastrointestinal Oncology  
2009 Gastrointestinal Oncology Conference  
October 1–3, 2009**

**ABSTRACTS SELECTED FOR POSTER PRESENTATIONS**

			pancreas, liver, lung						
G.B.	Male	65	Body of pancreas, liver	1)Gemcitabine+ Docetaxel+ Capecitabine	6928	917	7.9	5.8	PR
D.M.	Male	49	Uncinate process of pancreas, liver	1) Docetaxel + Gemcitabine	42,252	4,682	7.9	3.3	PD
R.R.	Male	66	Head of pancreas, liver	None	3,658	1,136	7.5	6.7	PR
H.G.	Male	73	Head of pancreas, liver, lung	1)5-FU/LK 2)Gemcitabine+ Erlotinib 3)Capecitabine	5690	3978	6.6	6.2	MR
M.L.	Male	64	Head of pancreas, liver, lungs	1) Gemcitabine + Docetaxel + Capecitabine	85	42	6.3	3.5	Mixed

#Cholangiocarcinoma

\*Time since original diagnosis of pancreatic cancer.

\*\*Time since diagnosis of metastatic pancreatic cancer.

Abbreviations: 5-FU=5-fluorouracil; LK=leucovorin; LN=lymph node; MR=minor response; PD=progressive disease; PR=partial response; XRT=radiation therapy