724P Real-world comparative effectiveness of nab-paclitaxel plus gemcitabine (nab-P/G) vs FOLFIRINOX (FFX) in patients (pts) with advanced pancreatic cancer (aPC)

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Background: Current guidelines recommend chemotherapy with nab-P/G or FFX as the preferred first-line (1L) treatment for metastatic (m)PC pts with good performance status. However, no clinical trial has directly compared 1L nab-P/G vs FFX in mPC or aPC. We conducted a systematic review of the real-world comparative effectiveness of nab-P/G vs FFX in this setting.

Methods: Embase, Medline, and ASCO GI 2018 were searched through January 2018 for real world, retrospective studies directly comparing 1L nab-P/G vs FFX in mPC/aPC. Radiotherapy studies were excluded.

Results: 550/580 records did not meet eligibility criteria, mainly as they were not comparative (264) nor 1L (188). After removing 5 duplicates, the remaining 25 studies (16 mPC; 9 aPC) assessed > 5464 pts who received nab-P/G or FFX. Generally, a lower proportion of pts in the nab-P/G group (range, 59% - 100%) had an ECOG PS score of 0 or 1 vs FFX (82% - 100%) (12 studies). Median overall survival (OS; 19 studies) ranged from 5.5 mo to "not reached" for nab-P/G, and 8.6 to 15.9 mo for FFX (Table); median progression-free survival (12 studies) ranged from 4 to 8.5 mo and 3.7 to 11.7 mo, respectively. In 2 studies that reported OS based on ECOG PS, the median OS for pts with ECOG PS 0/1 was 12.1 and 14.1 mo for nab-P/G vs 11.4 and 13.7 mo for FFX. Overall response rates ranged from 10% to 41% for nab-P/G and 6% to 34% for FFX (4 studies), and disease control rates ranged from 50% to 92% and 56% to 89%, respectively (5 studies). Safety outcomes were heterogeneously reported in 1667 pts (10 studies) receiving nab-P/G or FFX (Table).

Conclusions: Several real-world studies have compared the effectiveness of nab-P/G vs FFX, highlighting the clinical significance. A systematic review of these studies shows that nab-P/G and FFX have comparable effectiveness in mPC/aPC. Differences were observed in the toxicity profiles for the 2 regimens, which may drive treatment decisions. Table. Studies reporting OS, PFS, and safety.

Editorial acknowledgement: Editorial assistance was provided by Narender Dhingra, MediTech Media.

Legal entity responsible for the study: Celgene Corporation.

Funding: Celgene Corporation.

Disclosure: E.G. Chiorean: Advisor: Celgene, Genentech, Novocure, Pfizer; Research funding: Boehringer Ingelheim, Celgene, Ignyta, Incyte, Lilly, Stemlive. G. Giordano: Honoraria: Celgene, Sanofi; Consultancy: Celgene; Travel accomodation expenses, Celgene. G. Kim: Consultant, Speaker: Celgene, Ipsen. S-E. Al-Batran: Consultancy: Bristo-Myers Squibb, Celgene, Lilly, Merck, Roche, Servier; Speaker: Celgene, Lilly, Nordic Bioscience, Roche; research funding, Celgene, Hospira, Lilly, Medac, Novartis, Roche, Vibor. All other authors have declared no conflicts of interest.

Table: 724P

Study	n (1L)		Median 1L OS, mo		Median 1L PFS, mo		Grade ≥ 3 AEs		
	nab-P/G	FFX	nab-P/G	FFX	nab-P/G	FFX	AE	nab-P/G	FFX
Beyer 2016 (mPC)	19	57	7	12	NR	NR		NR	NR
Park 2016 (mPC)	18	9	6.1	9.9	NR	NR		NR	NR
Braiteh 2017 (mPC)	122	80	8.6[a]	8.6[a]	NR	NR	Neutropenia Febrile neutropenia Anemia Thrombocytopenia	28% 1% 13% 11%	30% 3% 6% 14%
Caponnetto 2017 (mPC)	20	23	NR	NR	6	5		NR	NR
Cartwright 2017 (mPC)	255	159	9.8[b]	11.4[b]	NR	NR		NR	NR
Cherniawsky 2017 (aPC)[c]	NR	NR	10	11	6.9	8.8		NR	NR
Javed 2017 (mPC)	80	191	7.0	9.0	NR	NR		NR	NR
Kasi 2017 (aPC)[c]	47 (33)	107 (56)	10.8	15.9	5.7	11.7	Neutropenia Peripheral neuropathy Diarrhea Anemia Thrombocytopenia Elevated transaminases Elevated creatinine	17% 6% 0% 31% 6% 6% 4%	33% 6% 5% 14% 28% 4% 3%
Maeda 2017 (aPC)[c]	9 (NR)	16 (NR)	11.5	13.1	6.1	6.3		NR	NR
Mañes-Sevilla 2017 (mPC)	20	15	9.2	11.4	5.4	7.1	Any	35%	41%
Muranaka 2017 (aPC)[c]	22 (17)	16 (1)	Not reached	9.9	6.5	3.7	Neutropenia Peripheral neuropathy Febrile neutropenia Diarrhea Anemia Nausea Anorexia Thrombocytopenia Vomiting	55% 0% 9% 0% 18% 0% 5% 14% 0%	69% 0% 19% 0% 6% 6% 6% 6% 0%
Papneja 2017 (aPC)[c]	33 (21)	86 (70)	9	9	4	6		NR	NR
Shahda 2017 (aPC)[c]	NR	NR	11.4-14.4[d]	11.3-12.3[d]	4.6-6.1[d]	5.3-9.4[d]		NR	NR
Wang 2017 (aPC)[c]	87 (66)	92 (55)	10.5 (10.0)	14.1 (9.4)	8.5 (8.3)	8.4 (6.6)		NR	NR
Watanabe 2017[e] (mPC)	65	70	14.0	11.5	6.5	5.7	Neutropenia Peripheral neuropathy Febrile neutropenia Diarrhea Anorexia	45% 5% 2% 2% 3%	47% 4% 9% 1% 13%
Barrera 2018 (mPC)	31	44	8.1	9.9	4.6	5.8	Neutropenia Peripheral neuropathy Fatigue	13% 7% 26%	20% 4% 11%
Franco 2018 (aPC)[c]	49 (NR)	87 (NR)	13	13	NR	NR		NR	NR
Helen 2018 (aPC)[c]	NR	NR	NR (5.5	NR (8.8)	NR	NR		NR	NR
Hwang 2018 (mPC)	149	159	11.4	9.6	6.8	5.0		NR	NR
Kim 2018 (mPC)	337	317	12.1[f]	13.8[f]	NR	NR		NR	NR
Total[g]	1363 (1253)	1528 (1306)							

[a]Reported as database persistence, a proxy for OS.

[b]For pts with ECOG PS 0/1, OS was 12.1 mo for nab-P/G and 11.4 mo for FFX.

[c]aPC includes mPC. The numbers in parentheses are for pts with mPC.

[d]Biomarker study observing homologous recombination deficiency low vs high in each treatment regimen with data presented here as a range.

[e]Modified FFX (no bolus 5-FU and reduced dose irinotecan).

[f]For pts with ECOG PS 0/1, OS was 14.1 mo for nab-P/G and 13.7 mo for FFX.

[g]Represents minimum as some studies did not report the number of pts. The numbers in parentheses are for pts with mPC. 1L, first line; AE, adverse event; aPC, advanced pancreatic cancer; FFX, FOLFIRINOX; mPC, metastatic pancreatic cancer; nab-P/G, nab-paclitaxel/gemcitabine; NR, not reported; OS, overall survival; PFS, progression-free survival.