

GI SLIDE DECK 2019

Selected abstracts from:



ESMO 2019 Congress
27 Sept – 01 Oct 2019 | Barcelona, Spain

Letter from ESDO

DEAR COLLEAGUES

It is our pleasure to present this ESDO slide set which has been designed to highlight and summarise key findings in digestive cancers from the major congresses in 2019. This slide set specifically focuses on the **ESMO 2019 Congress** and is available in English, French, Chinese and Japanese.

The area of clinical research in oncology is a challenging and ever changing environment. Within this environment, we all value access to scientific data and research which helps to educate and inspire further advancements in our roles as scientists, clinicians and educators. We hope you find this review of the latest developments in digestive cancers of benefit to you in your practice. If you would like to share your thoughts with us we would welcome your comments. Please send any correspondence to info@esdo.eu.

Finally, we are also very grateful to Lilly Oncology for their financial, administrative and logistical support in the realisation of this activity.

Yours sincerely,

Eric Van Cutsem
Thomas Seufferlein
Côme Lepage
Wolff Schmiegel
Phillippe Rougier (hon.)

Ulrich Güller
Thomas Gruenberger
Tamara Matysiak-Budnik
Jaroslav Regula
Jean-Luc Van Laethem

(ESDO Governing Board)



ESDO Medical Oncology Slide Deck

Editors 2019

COLORECTAL CANCERS

- Prof Eric Van Cutsem** Digestive Oncology, University Hospitals, Leuven, Belgium
- Prof Wolff Schmiegel** Department of Medicine, Ruhr University, Bochum, Germany
- Prof Thomas Gruenberger** Department of Surgery, Kaiser-Franz-Josef Hospital, Vienna, Austria
- Prof Jaroslaw Regula** Department of Gastroenterology and Hepatology, Institute of Oncology, Warsaw, Poland



PANCREATIC CANCER AND HEPATOBILIARY TUMOURS

- Prof Jean-Luc Van Laethem** Digestive Oncology, Erasme University Hospital, Brussels, Belgium
- Prof Thomas Seufferlein** Clinic of Internal Medicine I, University of Ulm, Ulm, Germany
- Prof Ulrich Güller** Medical Oncology & Hematology, Kantonsspital St Gallen, St Gallen, Switzerland



GASTRO-OESOPHAGEAL AND NEUROENDOCRINE TUMOURS

- Prof Côme Lepage** University Hospital & INSERM, Dijon, France
- Prof Tamara Matysiak** Hepato-Gastroenterology & Digestive Oncology, Institute of Digestive Diseases, Nantes, France



BIOMARKERS

- Prof Eric Van Cutsem** Digestive Oncology, University Hospitals, Leuven, Belgium
- Prof Thomas Seufferlein** Clinic of Internal Medicine I, University of Ulm, Ulm, Germany



Glossary

1L	first-line	ESMO	European Society of Medical Oncology	ORR	overall/objective response rate
2L	second-line			(m)OS	(median) overall survival
3L	third-line	FAS	full analysis set	PD	progressive disease
4L	fourth-line	FFPE	formalin fixed paraffin embedded	PD-L1	programmed death-ligand 1
5FU	5-fluorouracil	FOLFIRI	folinic acid + fluorouracil + irinotecan	PE	pulmonary embolism
AE	adverse event	(m)FOLFOX	(modified) leucovorin + 5-fluorouracil + oxaliplatin	(m)PFS	(median) progression-free survival
AFP	alpha-fetoprotein			po	orally
ALT	alanine aminotransferase	FOLFIRINOX	oxaliplatin + irinotecan + leucovorin + 5-fluorouracil	PR	partial response
AST	aspartate aminotransferase			PS	performance status
bid	twice daily	GEJ	gastro-oesophageal junction	q(2/3/4)w	every (2/3/4) week(s)
BSC	best supportive care	GHS	global health status	QLQ-C30	quality of life questionnaire C30
CAPOX	capecitabine + oxaliplatin	GI	gastrointestinal	QLQ-STO22	quality of life questionnaire gastric cancer module
CEA	carcinoembryonic antigen	Gy	Gray		
CI	confidence interval	HCC	hepatocellular carcinoma	QoL	quality of life
CMS	consensus molecular subtypes	HCV	hepatitis C virus	R	randomized
CPS	combined positive score	HER2	human epidermal growth factor receptor 2	R0/1	resection 0/1
CR	complete response			RECIST	Response Evaluation Criteria In Solid Tumors
CRC	colorectal cancer	HR	hazard ratio		
CSC	chemotherapy/surgery/chemotherapy	HRQoL	health-related quality of life	RFS	relapse-free survival
CT	chemotherapy	IL6	interleukin 6	RPSFT	rank-preserving structural failure time
ctDNA	circulating tumour DNA	IQR	interquartile range	RR	relative risk
D	day	(m)ITT	(modified) intent-to-treat	SAE	serious adverse event
DCR	disease control rate	iv	intravenous	SC	surgery/chemotherapy
DFS	disease-free survival	LN	lymph node	SD	stable disease
DoR	duration of response	LSM	least square mean	SOX	S-1 + oxaliplatin
DOS	docetaxel + oxaliplatin + S-1	mCRC	metastatic colorectal cancer	TEAE	treatment-emergent adverse event
DVT	deep vein thrombosis	MSI-H	high microsatellite instability	TRAE	treatment-related adverse event
ECOG	Eastern Cooperative Oncology Group	NE	not evaluable	TTD	time to deterioration
EGFR	epidermal growth factor receptor	NET	neuroendocrine tumour	TTR	time to response
EQ-5D	EuroQol five dimensions questionnaire	NGS	next generation sequencing	VEGF(R)	vascular endothelial growth factor (receptor)
		NR	not reached		
EORTC	European Organisation for Research and Treatment of Cancer	O&C	open and closure	wt	wild type
		OR	odds ratio	XELOX	capecitabine + oxaliplatin

Contents

- Cancers of the oesophagus and stomach [6](#)
- Cancers of the pancreas, small bowel and hepatobiliary tract [34](#)
 - Pancreatic cancer [35](#)
 - Hepatocellular carcinoma [43](#)
 - Biliary tract cancer [52](#)
 - Neuroendocrine tumour [61](#)
- Cancers of the colon, rectum and anus [66](#)

Note: To jump to a section, right click on the number and 'Open Hyperlink'

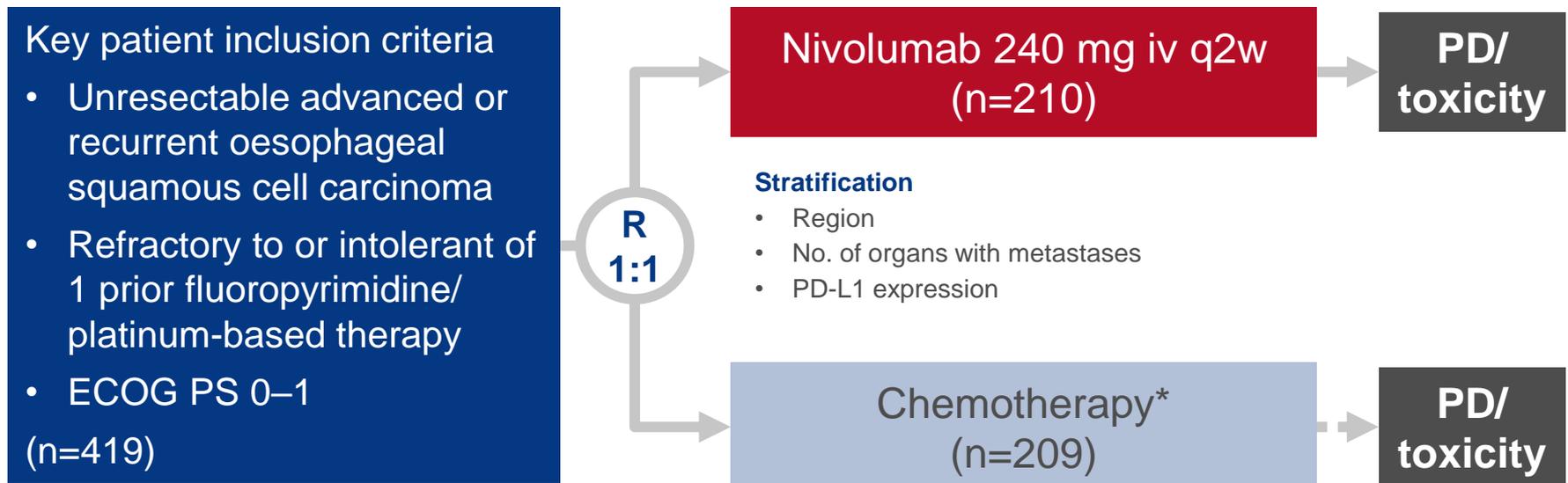
CANCERS OF THE OESOPHAGUS AND STOMACH

LBA11: Nivolumab versus chemotherapy in advanced esophageal squamous cell carcinoma (ESCC): The phase 3 ATTRACTION-3 study

– Cho BC, et al

Study objective

- To investigate the efficacy and safety of nivolumab compared with chemotherapy in patients with advanced oesophageal squamous cell carcinoma



PRIMARY ENDPOINT

- OS

SECONDARY ENDPOINTS

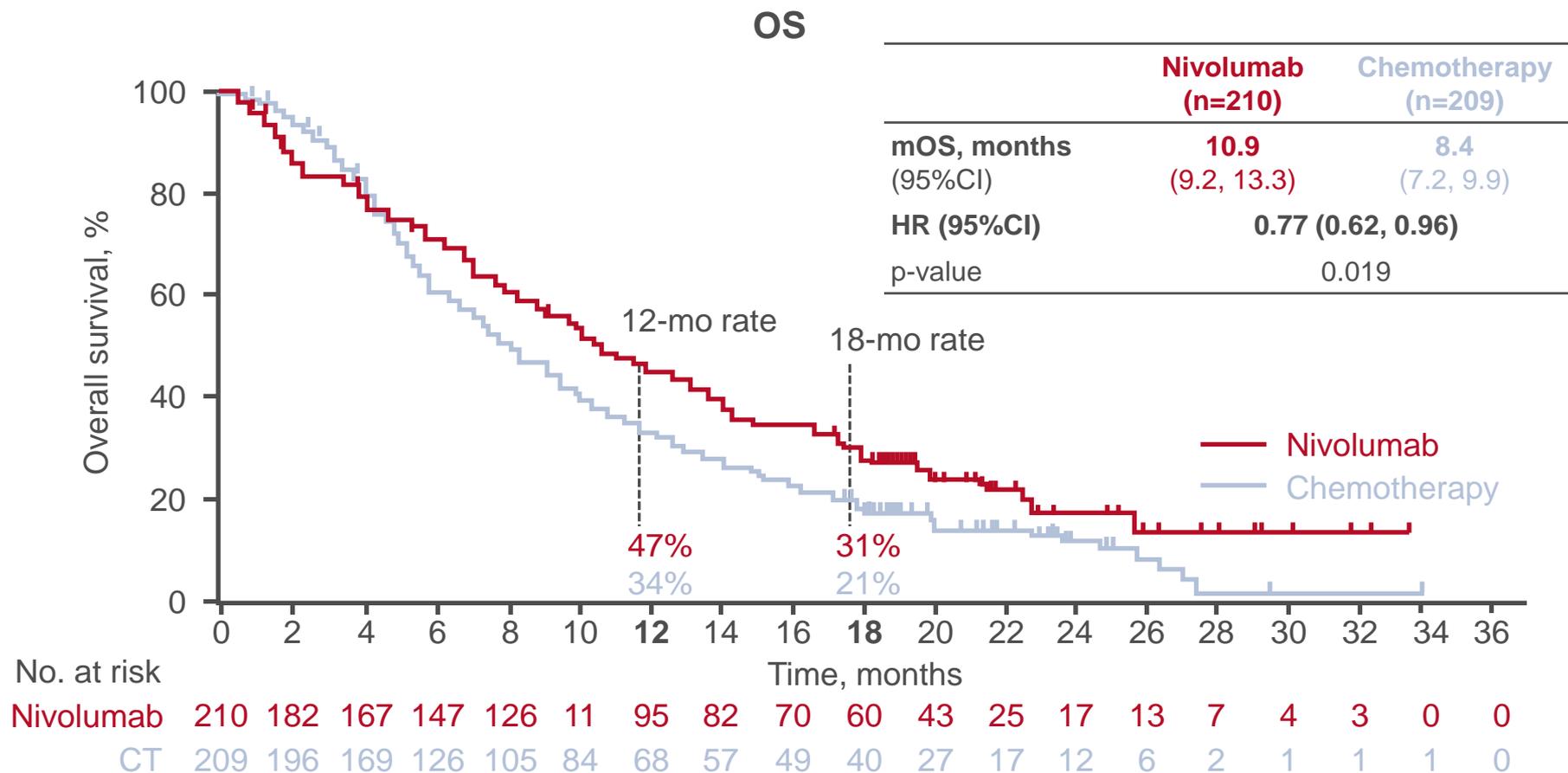
- PFS, ORR, DCR, TTR, DoR, HRQoL, safety

*Docetaxel 75 mg/m² q3w or paclitaxel 100 mg/m² iv qw 6-weeks on/1-week off

LBA11: Nivolumab versus chemotherapy in advanced esophageal squamous cell carcinoma (ESCC): The phase 3 ATTRACTION-3 study

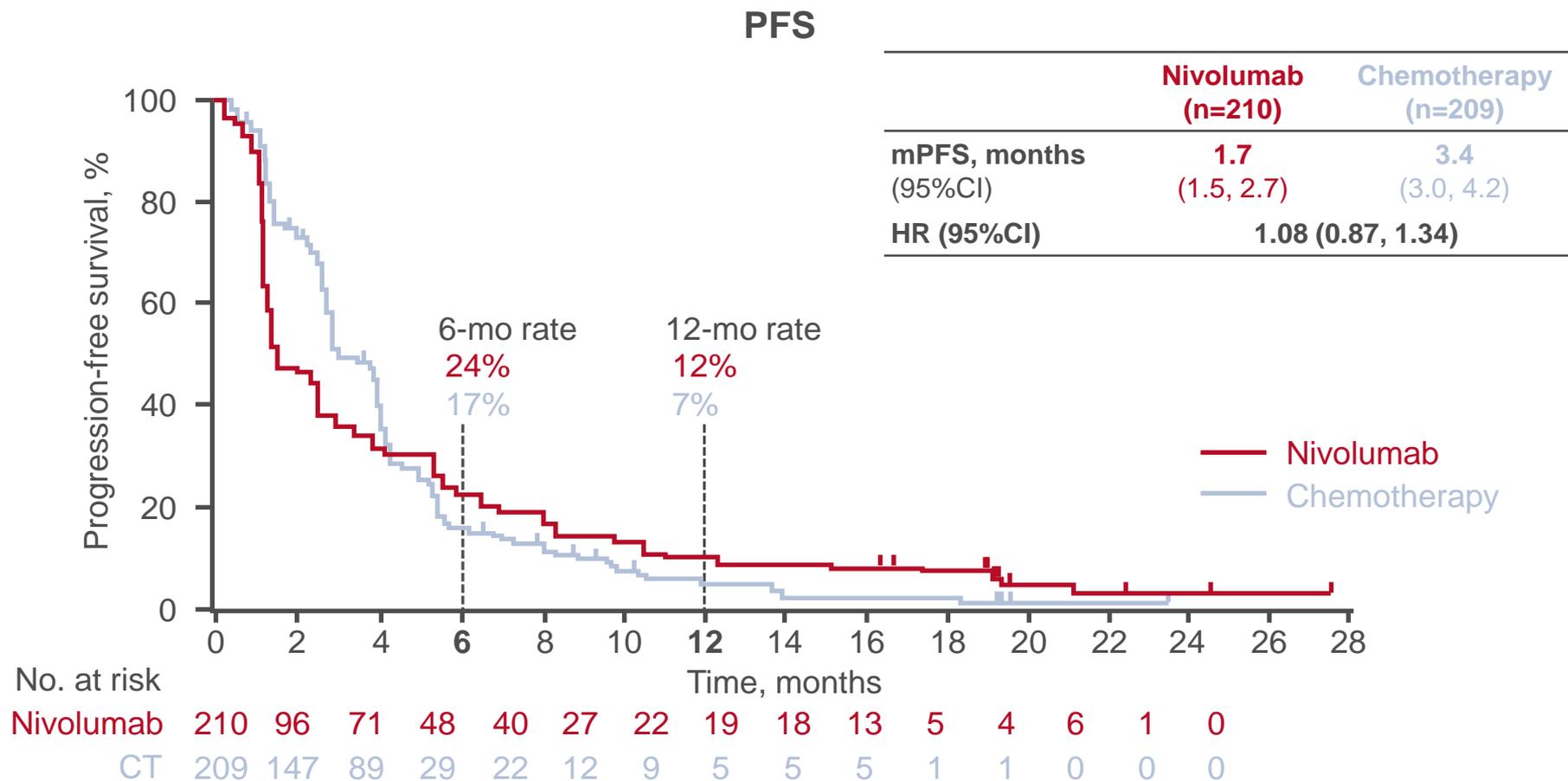
– Cho BC, et al

Key results



LBA11: Nivolumab versus chemotherapy in advanced esophageal squamous cell carcinoma (ESCC): The phase 3 ATTRACTION-3 study – Cho BC, et al

Key results (cont.)



LBA11: Nivolumab versus chemotherapy in advanced esophageal squamous cell carcinoma (ESCC): The phase 3 ATTRACTION-3 study

– Cho BC, et al

Key results (cont.)

Select grade 3–4 TRAEs, n (%)	Nivolumab (n=209)	Chemotherapy (n=208)
Gastrointestinal	2 (1)	2 (1)
Hepatic	1 (<1)	4 (2)
Pulmonary	2 (1)	4 (2)
Renal	1 (<1)	0 (0)
Skin	4 (2)	2 (1)

Conclusion

- In patients with previously treated advanced oesophageal squamous cell carcinoma, nivolumab demonstrated a significant improvement in OS with a manageable safety profile compared with chemotherapy

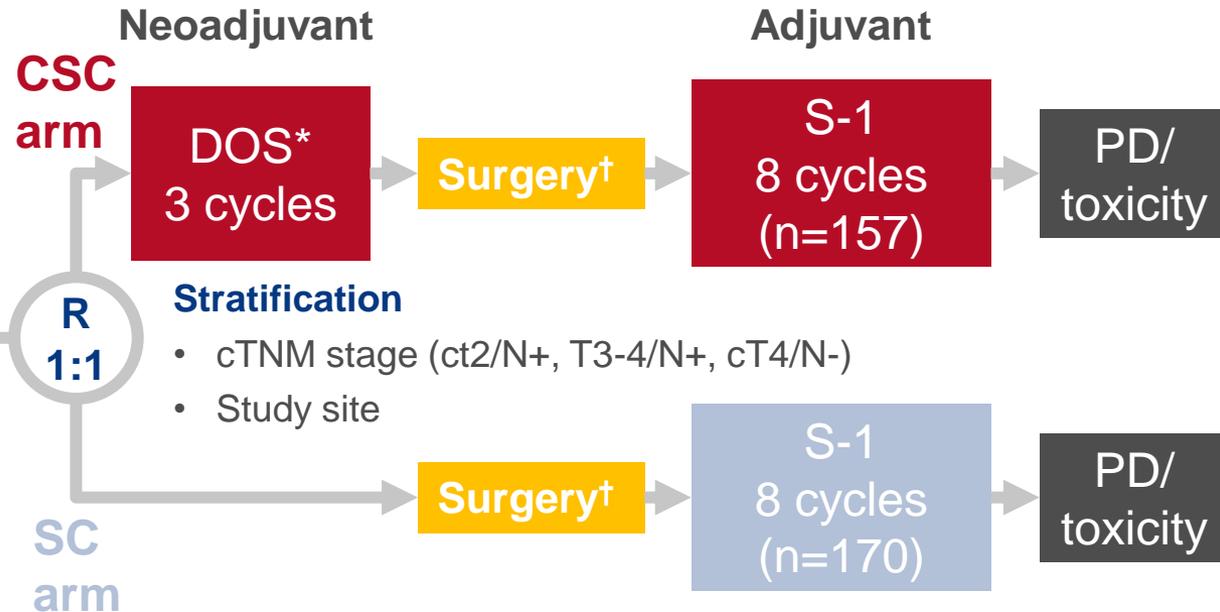
LBA41: Phase III randomized study of neoadjuvant chemotherapy (CT) with docetaxel(D), oxaliplatin(O) and S-1(S) (DOS) followed by surgery and adjuvant S-1, vs surgery and adjuvant S-1, for resectable advanced gastric cancer (GC) (PRODIGY) – Kang Y-K, et al

Study objective

- To investigate the efficacy and safety of neoadjuvant chemotherapy with DOS followed by surgery and adjuvant S-1 compared with surgery + adjuvant S-1 in patients with advanced gastric cancer

Key patient inclusion criteria

- Locally advanced gastric or GEJ cancer
 - cT2,3/N[+]M0 or cT4/N[any]M0
 - ECOG PS 0–1
- (n=530)



PRIMARY ENDPOINT

- 3-year PFS (FAS)

*Docetaxel 50 mg/m² iv D1, oxaliplatin 100 mg/mg² iv D1, S-1 40 mg/m² po bid D1–14; †gastrectomy + D2 LN dissection

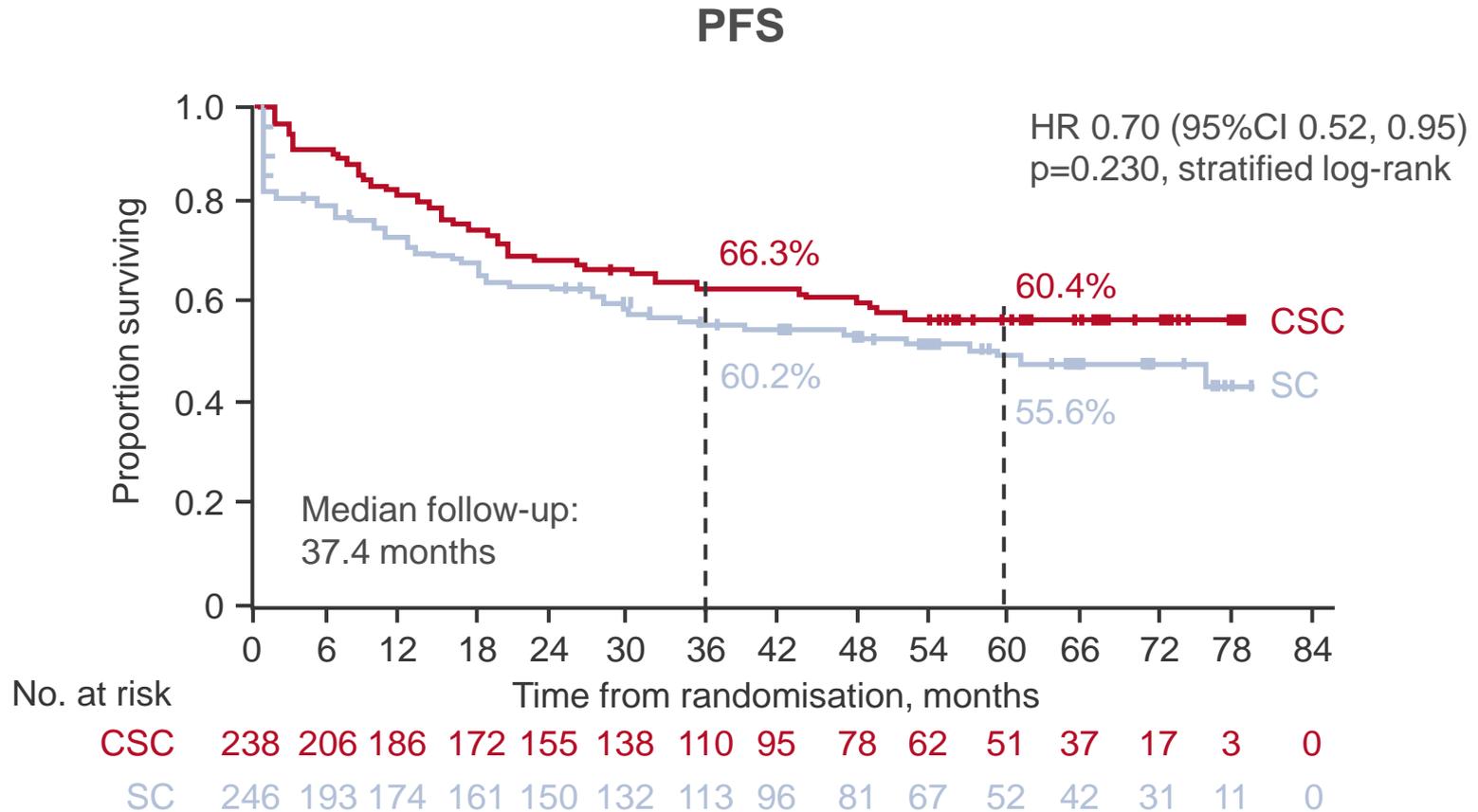
SECONDARY ENDPOINTS

- R0 resection rate, postoperative pathological stage, OS, safety

Kang Y-K, et al. Ann Oncol 2019;30(suppl):abstr LBA41

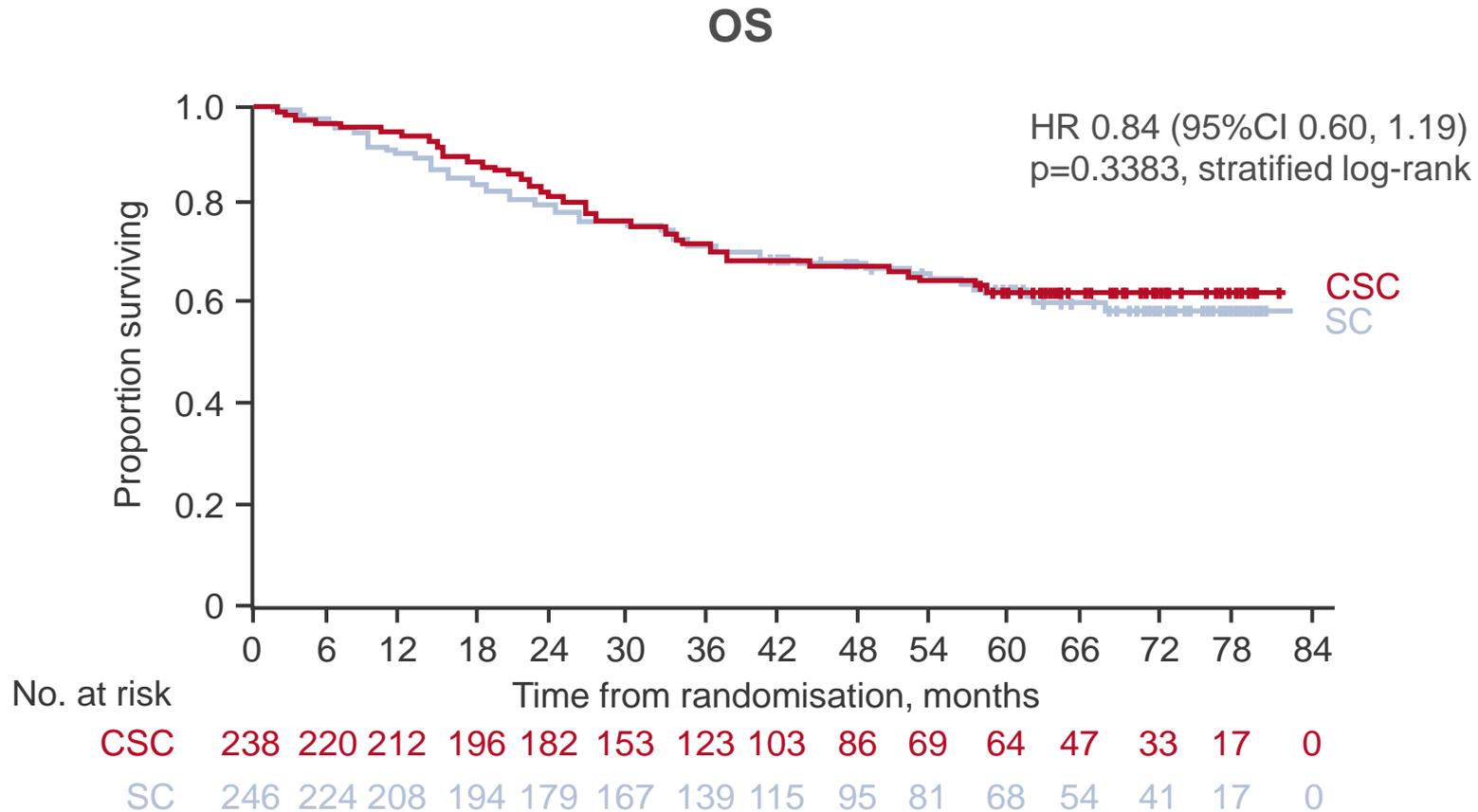
LBA41: Phase III randomized study of neoadjuvant chemotherapy (CT) with docetaxel(D), oxaliplatin(O) and S-1(S) (DOS) followed by surgery and adjuvant S-1, vs surgery and adjuvant S-1, for resectable advanced gastric cancer (GC) (PRODIGY) – Kang Y-K, et al

Key results



LBA41: Phase III randomized study of neoadjuvant chemotherapy (CT) with docetaxel(D), oxaliplatin(O) and S-1(S) (DOS) followed by surgery and adjuvant S-1, vs surgery and adjuvant S-1, for resectable advanced gastric cancer (GC) (PRODIGY) – Kang Y-K, et al

Key results (cont.)



LBA41: Phase III randomized study of neoadjuvant chemotherapy (CT) with docetaxel(D), oxaliplatin(O) and S-1(S) (DOS) followed by surgery and adjuvant S-1, vs surgery and adjuvant S-1, for resectable advanced gastric cancer (GC) (PRODIGY) – Kang Y-K, et al

Key results (cont.)

	CSC (n=238)	SC (n=246)	Grade ≥3 TEAEs occurring in ≥5%, n (%)	CSC (n=238)
O&C or bypass only	3 (1.4)	18 (7.3)	Haematological	
R2 resection	0	7 (2.9)	Neutropenia	30 (12.6)
R1 resection	5 (2.3)	10 (4.1)	Febrile neutropenia	22 (9.2)
R0 resection	214 (96.4)	211 (85.8)	Gastrointestinal	
Total gastrectomy	120 (56.1)*	120 (56.9)	Diarrhoea	12 (5.0)
Subtotal gastrectomy	94 (43.9)	91 (43.1)	Treatment-related mortalities	2 (0.8)†
D2 dissection	210 (98.1)	207 (98.1)		
No. of LN dissected, mean (SD)	44.2 (19.5)	50.8 (18.6)		

Conclusion

- In patients with advanced gastric or GEJ cancer, the use of neoadjuvant chemotherapy followed by surgery and adjuvant S-1 demonstrated better R0 resection rates and tumour downstaging as well as improved PFS compared with surgery followed by adjuvant S-1 and was generally well-tolerated

LBA42: Perioperative chemotherapy of oxaliplatin combined with S-1 (SOX) versus postoperative chemotherapy of SOX or oxaliplatin with capecitabine (XELOX) in locally advanced gastric adenocarcinoma with D2 gastrectomy: A randomized phase III trial (RESOLVE trial) – Ji J, et al

Study objective

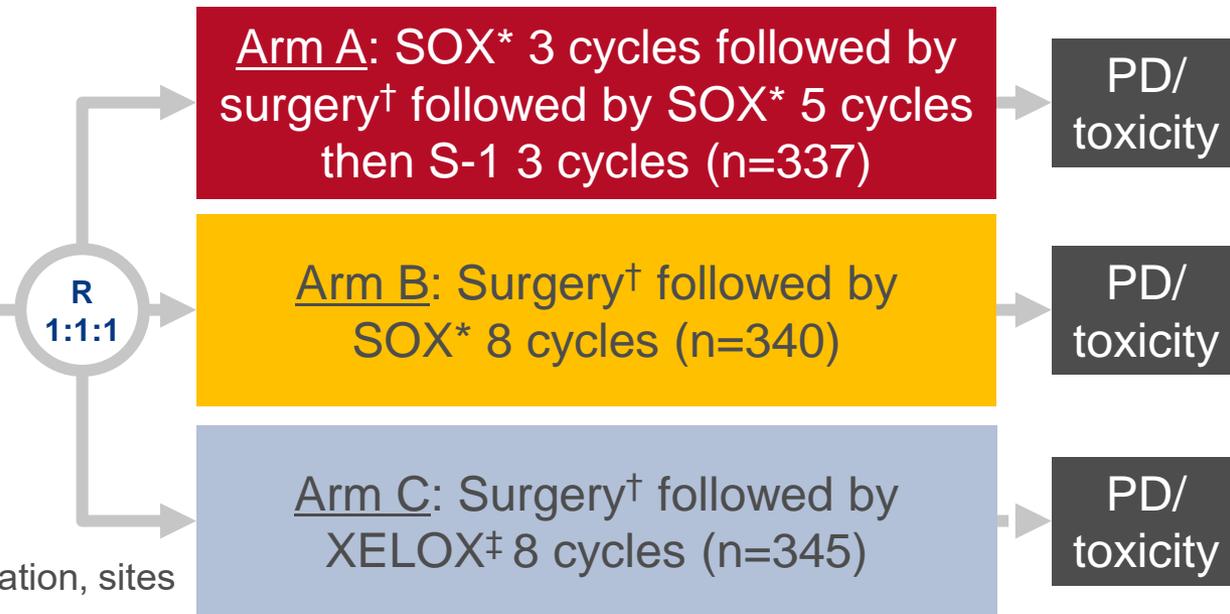
- To investigate the efficacy and safety of perioperative chemotherapy with SOX compared with postoperative chemotherapy with SOX or XELOX in patients with locally advanced gastric cancer

Key patient inclusion criteria

- Locally advanced gastric and GEJ adenocarcinoma
- cT4N+M0 or cT4NxM0 (n=1094)

Stratification

- Lauren's classification, sites



PRIMARY ENDPOINT

- 3-year DFS

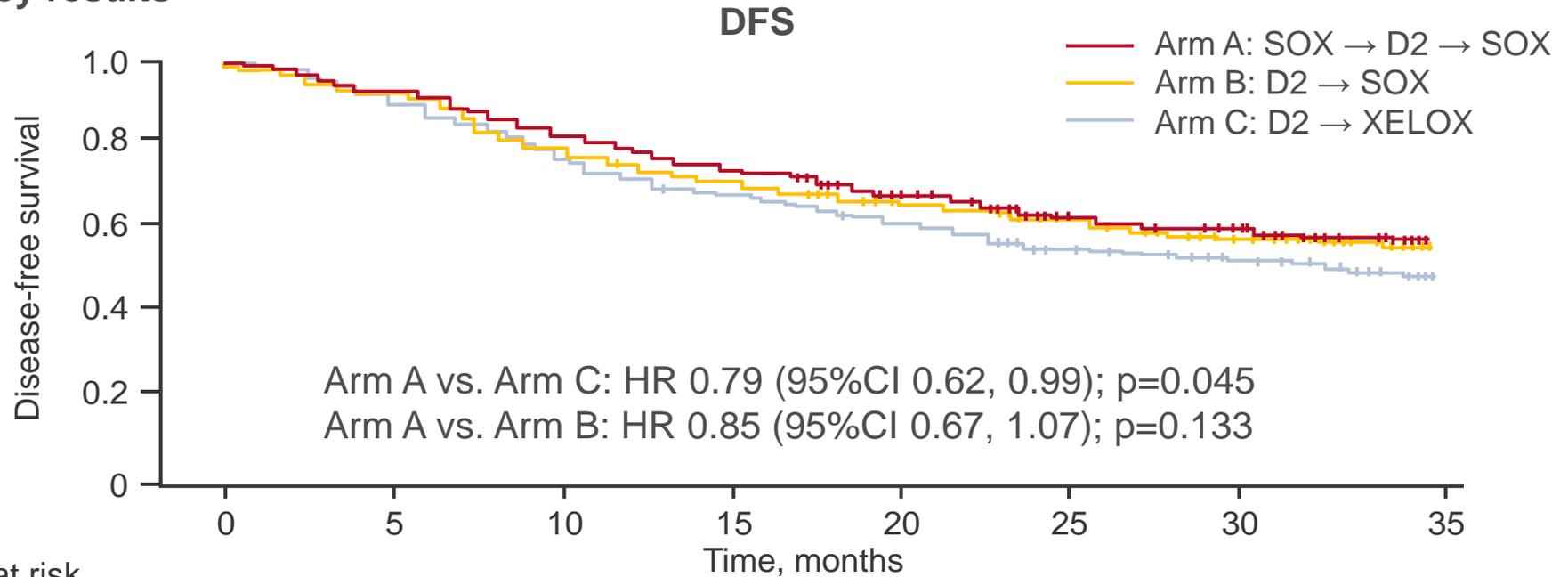
*S-1 40–60 mg bid D1–14 + oxaliplatin 130 mg/m² iv D1 q3w;
†D2 gastrectomy; ‡capecitabine 1000 mg/m² bid D1–14 + oxaliplatin 130 mg/m² iv D1 q3w

SECONDARY ENDPOINTS

- 5-year OS, safety

LBA42: Perioperative chemotherapy of oxaliplatin combined with S-1 (SOX) versus postoperative chemotherapy of SOX or oxaliplatin with capecitabine (XELOX) in locally advanced gastric adenocarcinoma with D2 gastrectomy: A randomized phase III trial (RESOLVE trial) – Ji J, et al

Key results



No. at risk

	0	5	10	15	20	25	30	35
Arm A	337	307	277	248	223	181	156	117
Arm B	340	309	268	237	215	188	168	123
Arm C	345	314	267	228	206	171	149	116

	Arm A: SOX → D2 → SOX	Arm B: D2 → SOX	Arm C: D2 → XELOX
3-year DFS, %	62.02	60.29	54.78

LBA42: Perioperative chemotherapy of oxaliplatin combined with S-1 (SOX) versus postoperative chemotherapy of SOX or oxaliplatin with capecitabine (XELOX) in locally advanced gastric adenocarcinoma with D2 gastrectomy: A randomized phase III trial (RESOLVE trial) – Ji J, et al

Key results (cont.)

Chemotherapy-related AEs, n (%)	Arm A (n=337)	Arm B (n=340)	Arm C (n=345)	p-value
Neutropenia	118 (40.0)	85 (36.2)	88 (33.9)	0.322
Leukopenia	85 (28.8)	68 (28.9)	63 (25.2)	0.384
Thrombocytopenia	93 (31.5)	53 (25.6)	37 (14.2)	<0.001
Anaemia	59 (20.0)	39 (16.6)	37 (14.2)	0.198
Nausea	48 (16.3)	30 (12.8)	45 (17.3)	0.343
ALT/AST increase	58 (19.7)	28 (11.9)	36 (13.9)	0.036
Fatigue	30 (10.2)	24 (10.2)	20 (7.7)	0.527
Vomiting	30 (10.2)	16 (6.8)	25 (9.6)	0.377
Sensory neuropathy	23 (7.8)	16 (6.8)	21 (8.1)	0.862
Diarrhoea	16 (5.4)	17 (7.2)	11 (4.2)	0.37

LBA42: Perioperative chemotherapy of oxaliplatin combined with S-1 (SOX) versus postoperative chemotherapy of SOX or oxaliplatin with capecitabine (XELOX) in locally advanced gastric adenocarcinoma with D2 gastrectomy: A randomized phase III trial (RESOLVE trial) – Ji J, et al

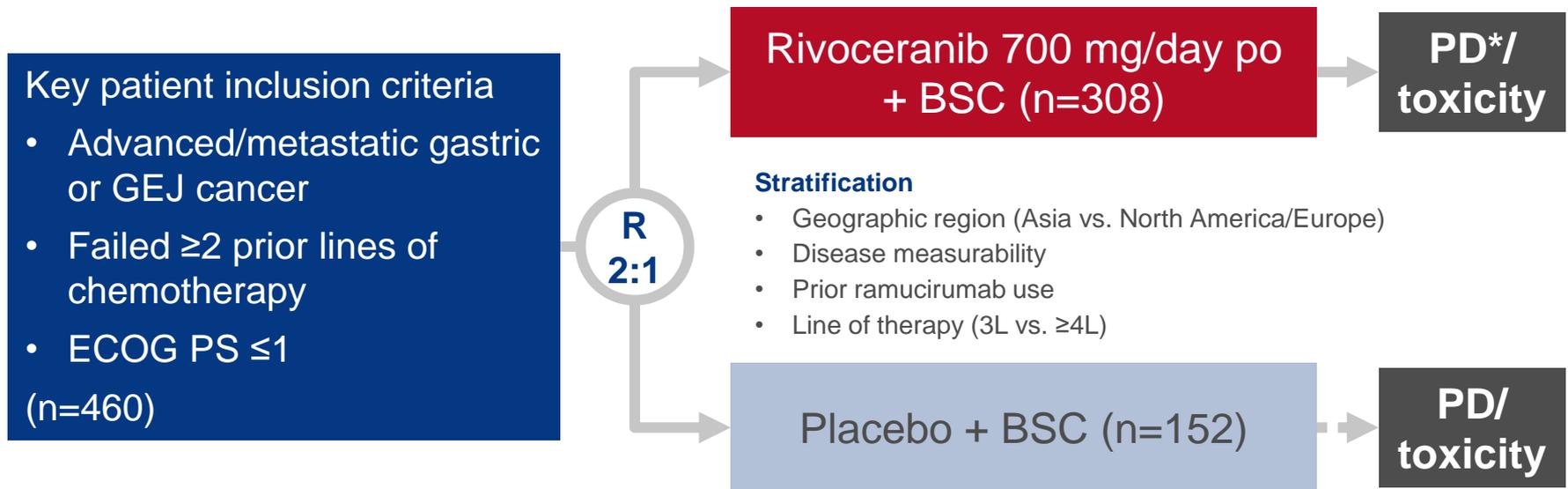
Conclusions

- In patients with locally advanced gastric cancer, perioperative chemotherapy followed surgery and postoperative chemotherapy demonstrated significant improvement in DFS compared with postoperative XELOX while postoperative SOX was found to be non-inferior to postoperative XELOX**
- Both perioperative and postoperative SOX showed no differences to postoperative XELOX with regards to surgical morbidity, mortality and safety**

LBA43: Randomized phase 3 ANGEL study of rivoceranib (apatinib) + best supportive care (BSC) vs placebo + BSC in patients with advanced/metastatic gastric cancer who failed ≥ 2 prior chemotherapy regimens – Kang Y-K, et al

Study objective

- To investigate the efficacy and safety of rivoceranib (apatinib) + BSC in patients with previously treated advanced or metastatic gastric cancer



PRIMARY ENDPOINT

- OS

SECONDARY ENDPOINT

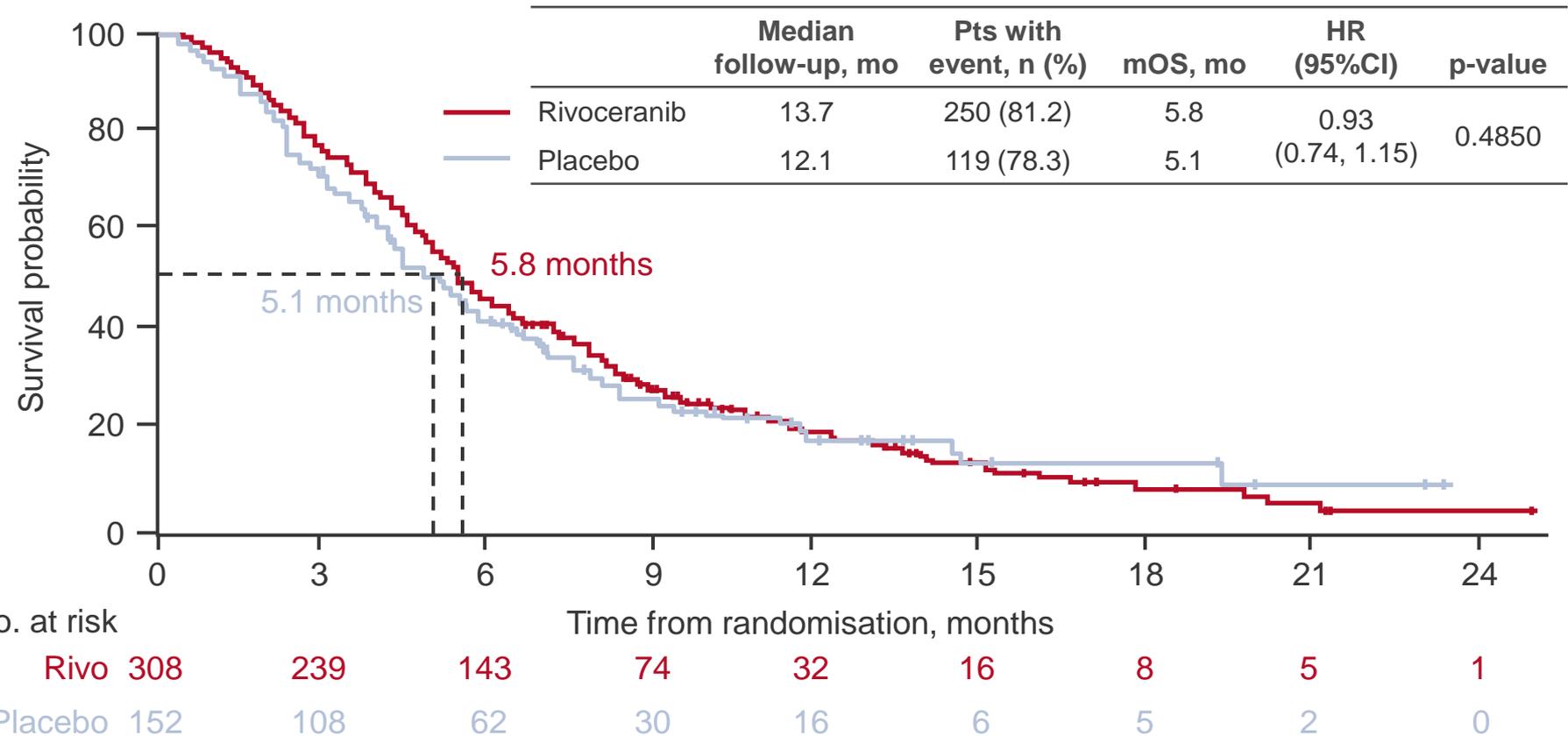
- PFS, ORR, DCR, QoL, safety

*Patients permitted to continue treatment beyond PD at the investigators' discretion

LBA43: Randomized phase 3 ANGEL study of rivoceranib (apatinib) + best supportive care (BSC) vs placebo + BSC in patients with advanced/metastatic gastric cancer who failed ≥ 2 prior chemotherapy regimens – Kang Y-K, et al

Key results

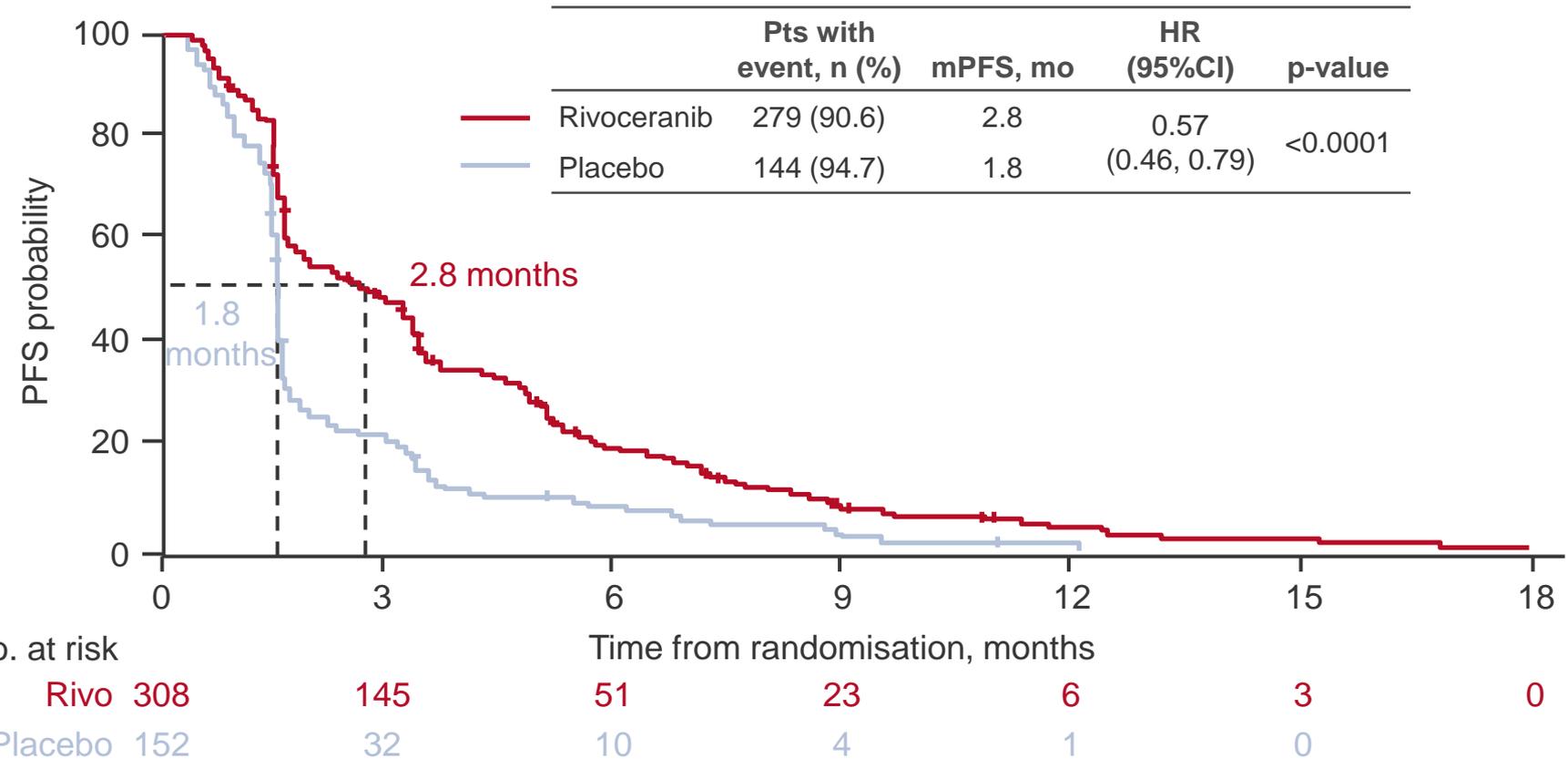
OS



LBA43: Randomized phase 3 ANGEL study of rivoceranib (apatinib) + best supportive care (BSC) vs placebo + BSC in patients with advanced/metastatic gastric cancer who failed ≥ 2 prior chemotherapy regimens – Kang Y-K, et al

Key results (cont.)

PFS



LBA43: Randomized phase 3 ANGEL study of rivoceranib (apatinib) + best supportive care (BSC) vs placebo + BSC in patients with advanced/metastatic gastric cancer who failed ≥ 2 prior chemotherapy regimens – Kang Y-K, et al

Key results (cont.)

Grade ≥ 3 TEAEs occurring in $\geq 5\%$, n (%)	Rivoceranib + BSC (n=307)	Placebo + BSC (n=151)
Hypertension	55 (17.9)	0 (0)
Proteinuria	23 (7.5)	0 (0)
Decreased appetite	22 (7.2)	7 (4.6)
Asthenia	26 (8.5)	15 (9.9)
Abdominal pain	22 (7.2)	7 (4.6)
Anaemia	30 (9.8)	24 (15.9)

Conclusion

- In patients with previously treated advanced or metastatic gastric cancer, rivoceranib did not significantly improve OS, but did demonstrate significant improvements in other outcomes (PFS, ORR, DCR) and was generally well tolerated

LBA44: Pembrolizumab with or without chemotherapy vs chemotherapy in patients with advanced G/GEJ cancer (GC) including outcomes according to microsatellite instability-high (MSI-H) status in KEYNOTE-062

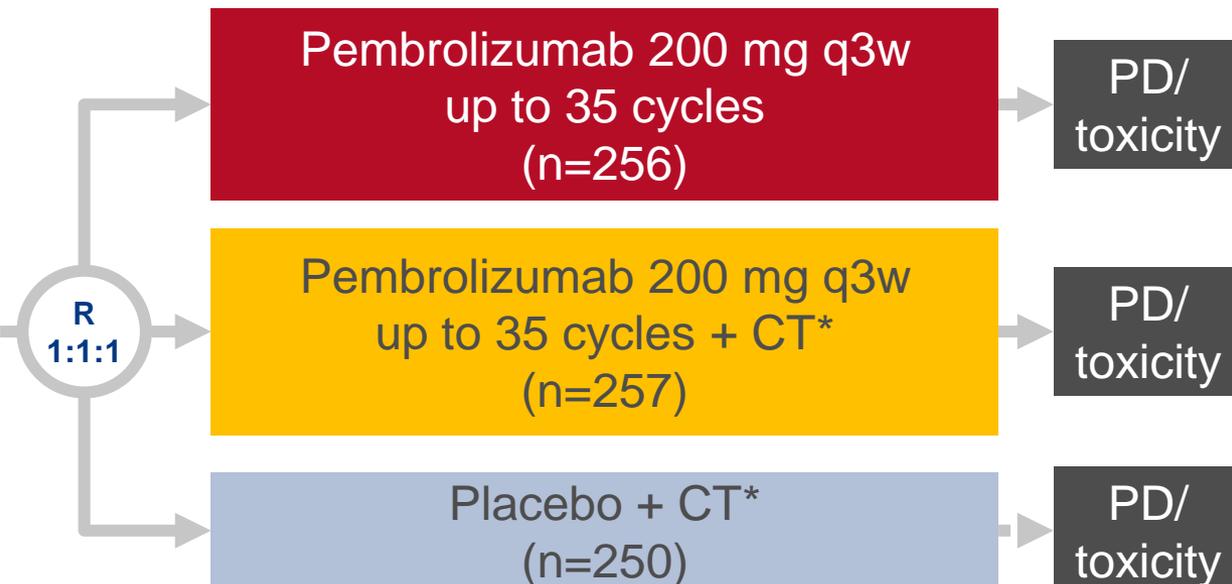
– Shitara K, et al

Study objective

- To investigate the efficacy and safety of pembrolizumab with or without CT vs. CT alone in patients with advanced gastric and GEJ adenocarcinoma according to MSI-H status

Key patient inclusion criteria

- Locally advanced, unresectable or metastatic gastric and GEJ adenocarcinoma
 - HER2/neu negative, PD-L1-positive disease (CPS ≥ 1)
 - ECOG PS 0–1
- (n=763)



Stratification

- Region; locally advanced or metastatic disease; 5FU or capecitabine

PRIMARY ENDPOINTS

- OS, PFS

*Cisplatin 80 mg/m² q3w + 5FU 800 mg/m²/day for 5 days q3w (cisplatin may be capped at 6 cycles per country guidelines) or capecitabine bid D1–14 q3w

SECONDARY ENDPOINTS

- ORR, safety

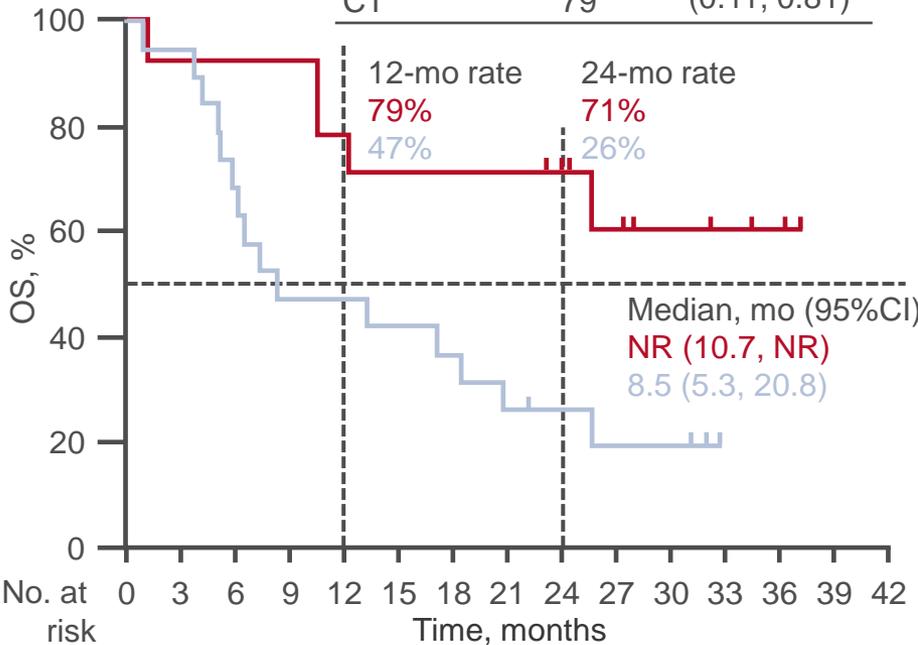
LBA44: Pembrolizumab with or without chemotherapy vs chemotherapy in patients with advanced G/GEJ cancer (GC) including outcomes according to microsatellite instability-high (MSI-H) status in KEYNOTE-062

– Shitara K, et al

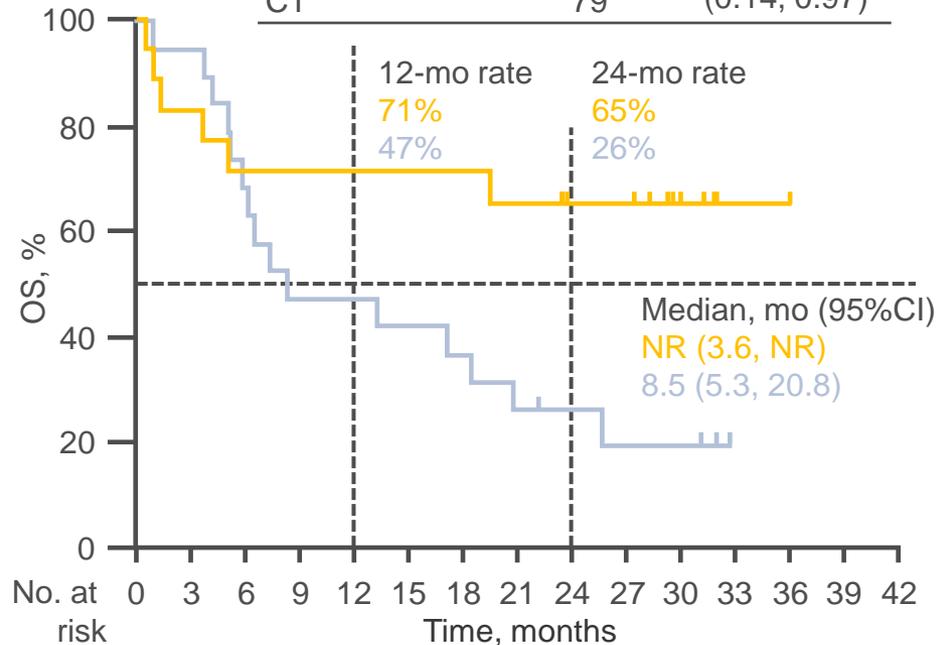
Key results

OS in CPS ≥1 and MSI-H subgroup

	Events, %	HR (95%CI)
Pembro	36	0.29
CT	79	(0.11, 0.81)



	Events, %	HR (95%CI)
Pembro + CT	35	0.37
CT	79	(0.14, 0.97)



No. at risk	0	3	6	9	12	15	18	21	24	27	30	33	36	39	42
Pembro	14	13	13	13	11	10	10	10	9	6	4	3	2	0	0
CT	19	18	13	9	9	8	7	5	4	3	3	0	0	0	0
P + CT	17	14	12	12	12	12	12	11	9	8	4	1	1	0	0
CT	19	18	13	9	9	8	7	5	4	3	3	0	0	0	0

- In the CPS ≥1 and non-MSI-H subgroup, mOS was 9.5 vs. 11.2 months (HR 0.94 [95%CI 0.77, 1.14]) for pembrolizumab vs. chemotherapy, respectively

LBA44: Pembrolizumab with or without chemotherapy vs chemotherapy in patients with advanced G/GEJ cancer (GC) including outcomes according to microsatellite instability-high (MSI-H) status in KEYNOTE-062

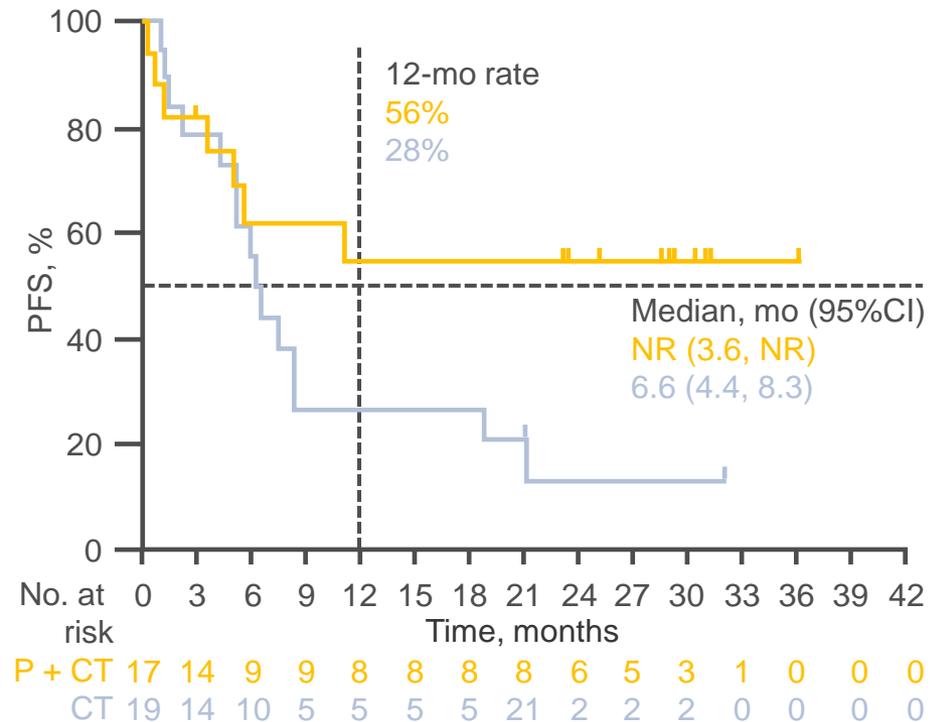
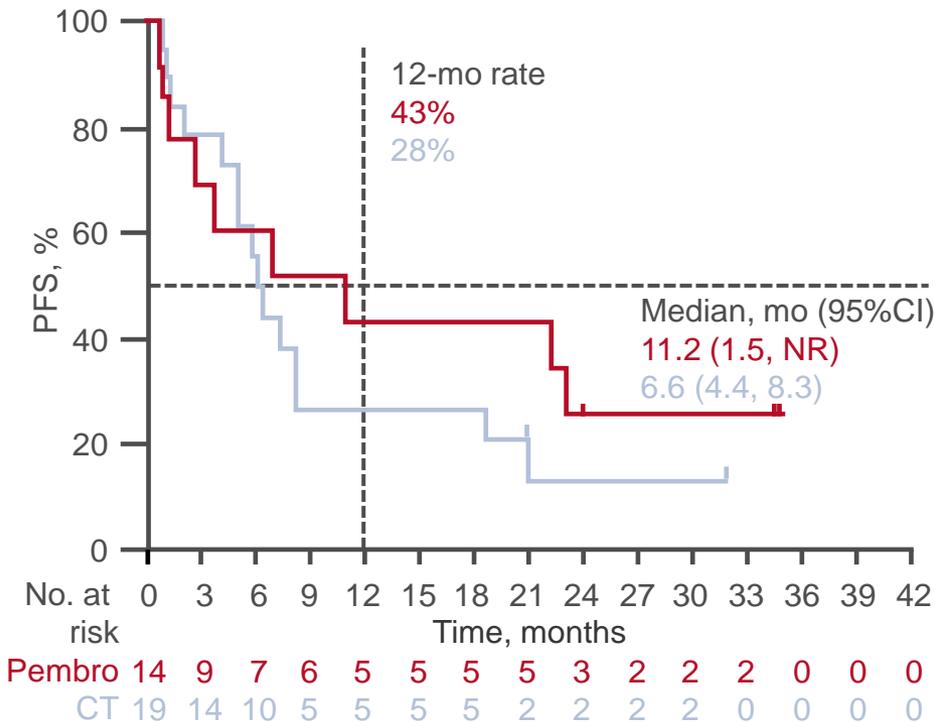
– Shitara K, et al

Key results (cont.)

PFS in CPS ≥1 and MSI-H subgroup

	Events, %	HR (95%CI)
Pembro	64	0.72
CT	79	(0.31, 1.68)

	Events, %	HR (95%CI)
Pembro + CT	41	0.45
CT	79	(0.18, 1.11)



LBA44: Pembrolizumab with or without chemotherapy vs chemotherapy in patients with advanced G/GEJ cancer (GC) including outcomes according to microsatellite instability-high (MSI-H) status in KEYNOTE-062

– Shitara K, et al

Key results (cont.)

Outcomes for CPS ≥1 + MSI-H subgroup	OS		PFS		ORR, %	DoR, months (range)
	Months	HR (95%CI)*	Months	HR (95%CI)*		
Pembrolizumab	NR	0.29 (0.11, 0.81)	11.2	0.72 (0.31, 1.68)	57.1	21.2 (1.4+–33.6+)
Pembrolizumab + CT	NR	0.37 (0.14, 0.97)	NR	0.45 (0.18, 1.11)	64.7	NR (1.6+–354.5+)
Chemotherapy	8.5		6.6		36.8	7.0 (2.0–30.4+)

- In the CPS ≥10 and MSI-H subgroup, mOS was NR vs. 13.6 months (HR 0.21 [95%CI 0.06, 0.83]) for pembrolizumab vs. chemotherapy, respectively
- In the CPS ≥10 and non-MSI-H subgroup, mOS was 16.0 vs. 10.8 months (HR 0.76 [95%CI 0.54, 1.09]) for pembrolizumab vs. chemotherapy, respectively
- In the CPS ≥10 and MSI-H subgroup, mOS was NR vs. 13.6 months (HR 0.26 [95%CI 0.07, 0.99]) for pembrolizumab + chemotherapy vs. chemotherapy, respectively

Conclusion

- **In patients with advanced gastric or GEJ cancer and MSI-H tumours, pembrolizumab with or without chemotherapy demonstrated better efficacy outcomes in both the CPS ≥1 and CPS ≥10 subgroups compared with chemotherapy alone**

*Comparison with chemotherapy

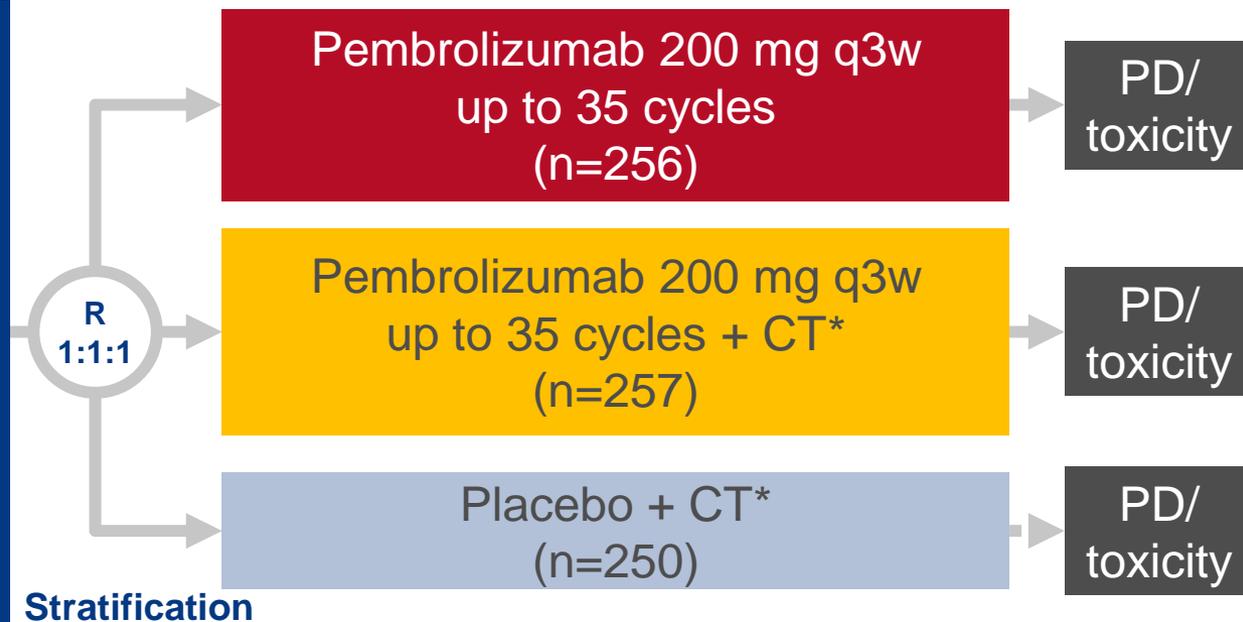
LBA45: Health-related quality of life (HRQoL) impact of pembrolizumab (P) versus chemotherapy (C) as first-line (1L) treatment in PD-L1–positive advanced gastric or gastroesophageal junction (G/GEJ) adenocarcinoma – Van Cutsem E, et al

Study objective

- To investigate the HRQoL in patients with PD-L1-positive advanced gastric or GEJ adenocarcinoma receiving 1L pembrolizumab with or without CT vs. CT alone

Key patient inclusion criteria

- Locally advanced, unresectable or metastatic gastric and GEJ adenocarcinoma
 - HER2/neu negative, PD-L1-positive disease (CPS ≥ 1)
 - ECOG PS 0–1
- (n=763)



- Region; locally advanced or metastatic disease; 5FU or capecitabine

PRIMARY ENDPOINTS

- OS, PFS

*Cisplatin 80 mg/m² q3w + 5FU 800 mg/m²/day for 5 days q3w (cisplatin may be capped at 6 cycles per country guidelines) or capecitabine bid D1–14 q3w

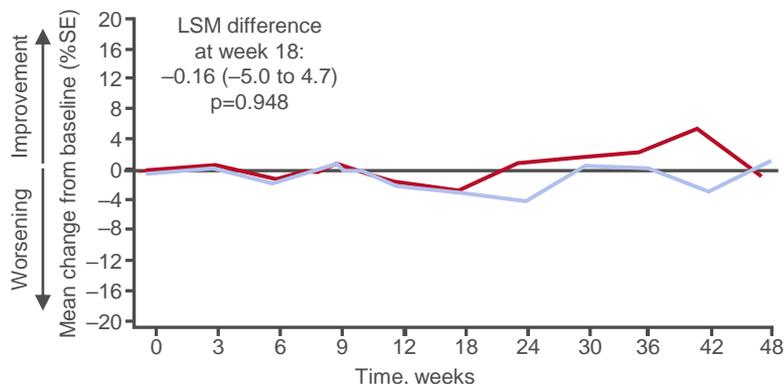
SECONDARY ENDPOINTS

- ORR, safety, HRQoL

LBA45: Health-related quality of life (HRQoL) impact of pembrolizumab (P) versus chemotherapy (C) as first-line (1L) treatment in PD-L1–positive advanced gastric or gastroesophageal junction (G/GEJ) adenocarcinoma – Van Cutsem E, et al

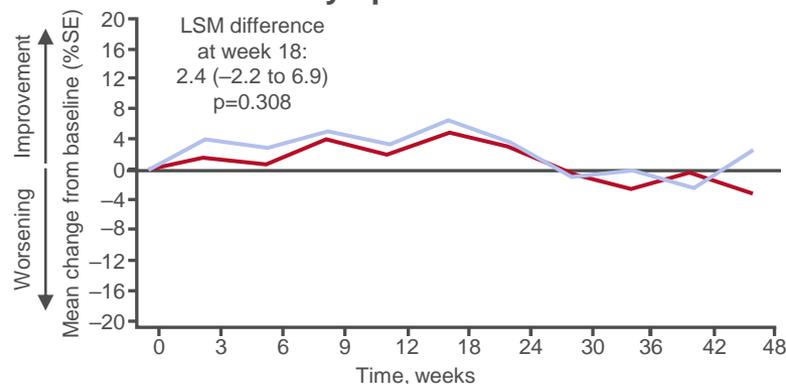
Key results

QLQ-C30 Global Health Score/QoL



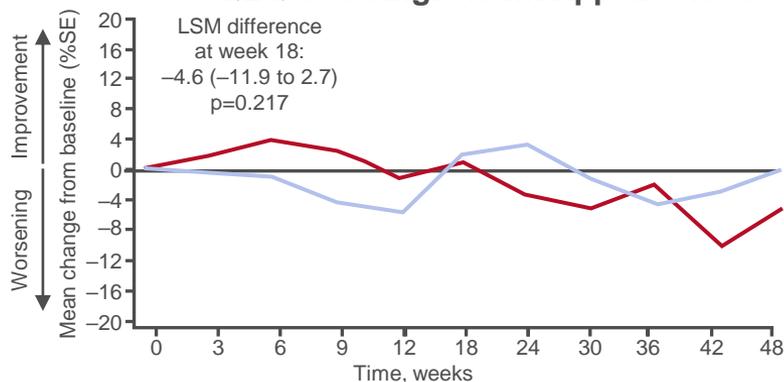
Pembro	239	210	182	144	134	98	63	58	48	47	45
CT	234	214	175	161	174	134	108	80	65	45	42

QLQ-C30 symptom scale: Nausea/vomiting



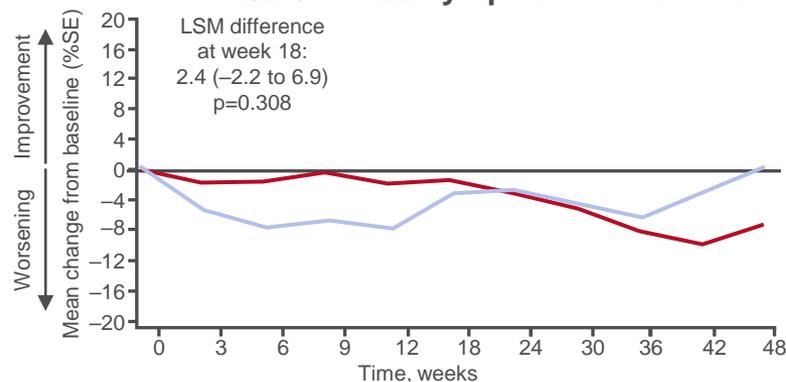
Pembro	239	210	182	144	134	98	63	58	48	43	45
CT	234	214	175	161	174	134	108	80	65	45	42

QLQ-C30 single item: Appetite loss



Pembro	239	210	182	144	134	98	63	58	48	43	45
CT	234	214	175	161	174	134	108	80	65	46	42

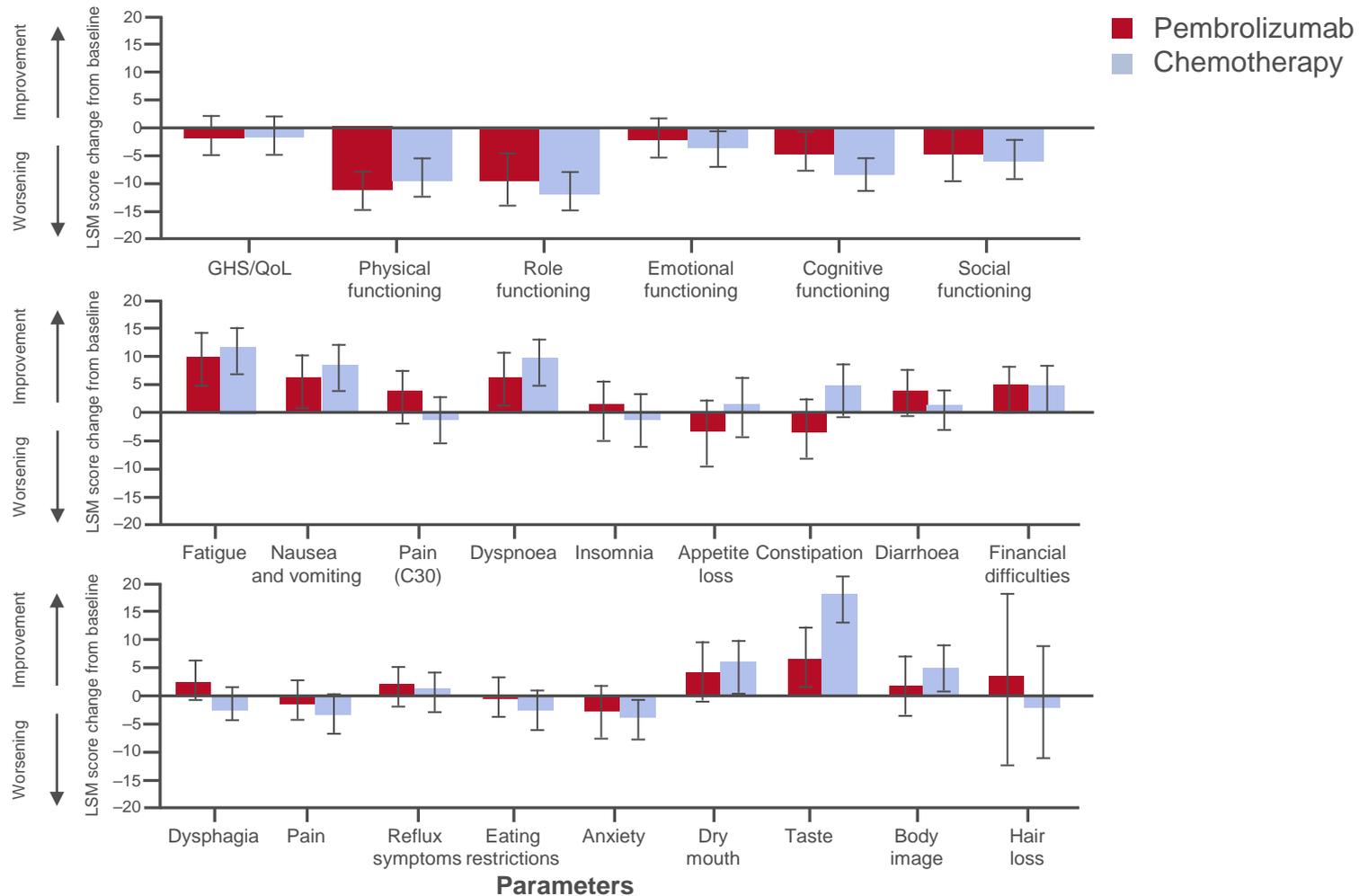
QLQ-STO22 symptom scale: Pain



Pembro	239	210	182	144	134	98	63	58	48	43	45
CT	234	214	175	161	174	134	108	80	65	46	42

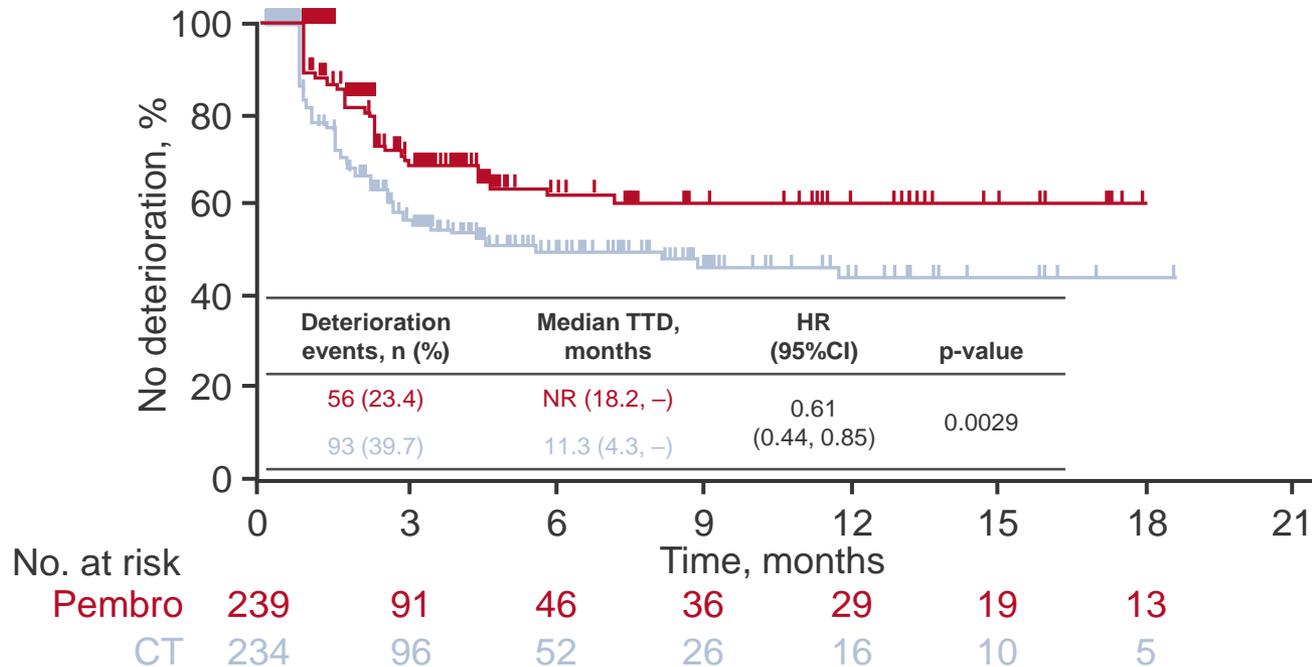
LBA45: Health-related quality of life (HRQoL) impact of pembrolizumab (P) versus chemotherapy (C) as first-line (1L) treatment in PD-L1-positive advanced gastric or gastroesophageal junction (G/GEJ) adenocarcinoma – Van Cutsem E, et al

Key results (cont.)



LBA45: Health-related quality of life (HRQoL) impact of pembrolizumab (P) versus chemotherapy (C) as first-line (1L) treatment in PD-L1–positive advanced gastric or gastroesophageal junction (G/GEJ) adenocarcinoma – Van Cutsem E, et al

Key results (cont.)



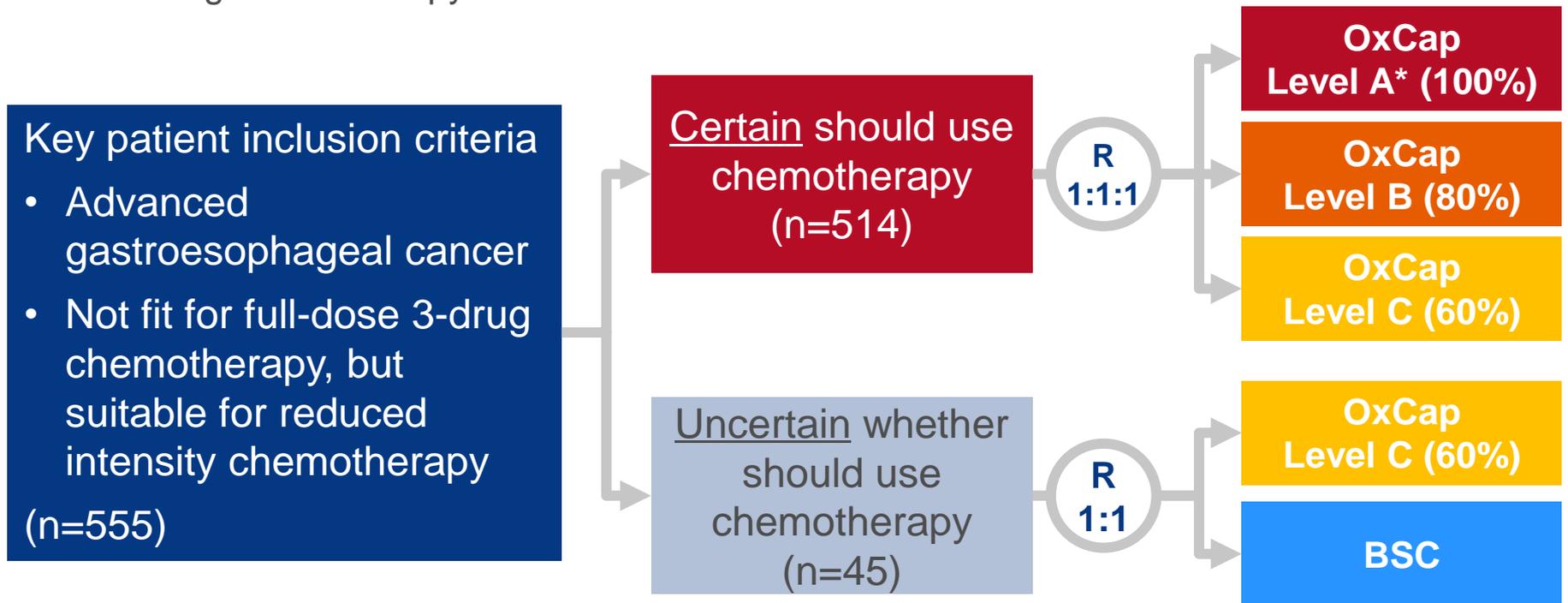
Conclusion

- In patients with advanced gastric or GEJ cancer, 1L pembrolizumab demonstrated similar HRQoL to chemotherapy apart from a significantly longer time to deterioration in the QLQ-C30 nausea/vomiting subscale

LBA46: Chemotherapy for frail and elderly patients (pts) with advanced gastroesophageal cancer (aGOAC): Quality of life (QoL) results from the GO2 phase III trial – Hall P, et al

Study objective

- To investigate the QoL in frail and elderly patients with advanced gastroesophageal cancer receiving chemotherapy



PRIMARY ENDPOINT

- 3-year PFS (FAS)

*Oxaliplatin 130 mg/m² D1 q3w + capecitabine 625 mg/m² bid continuous until progression

SECONDARY ENDPOINTS

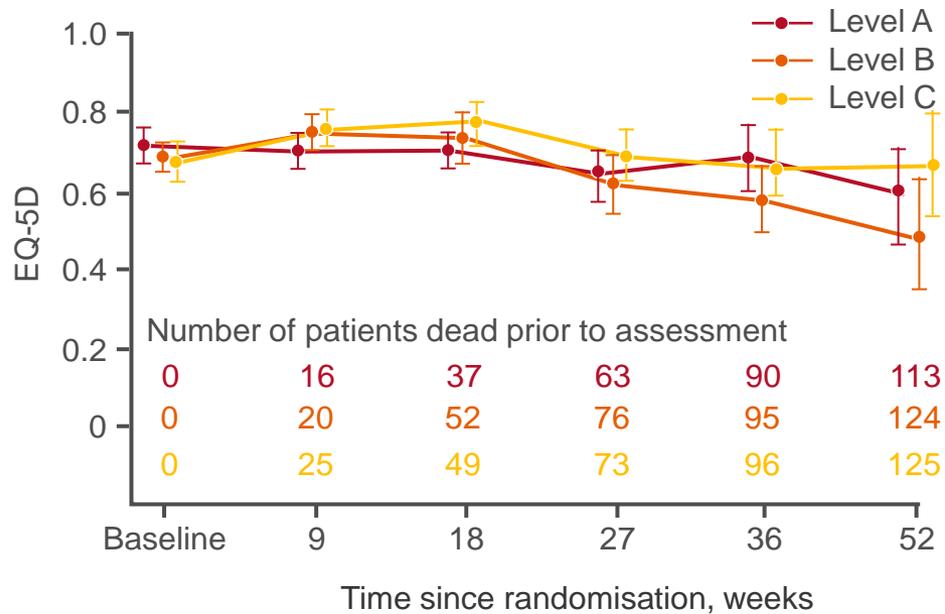
- R0 resection rate, postoperative pathological stage, OS, safety

Hall P, et al. Ann Oncol 2019;30(suppl):abstr LBA46

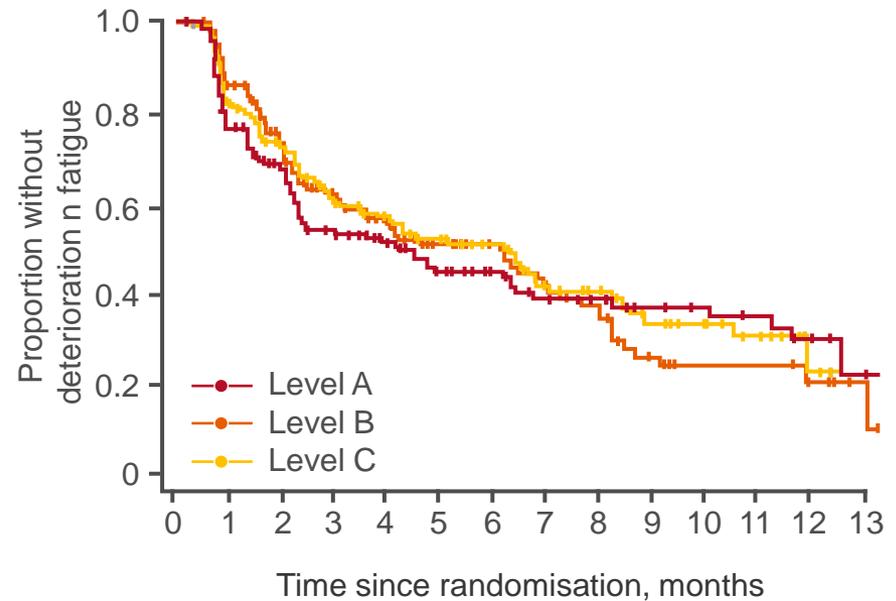
LBA46: Chemotherapy for frail and elderly patients (pts) with advanced gastroesophageal cancer (aGOAC): Quality of life (QoL) results from the GO2 phase III trial – Hall P, et al

Key results

Quality of life (EQ-5D)



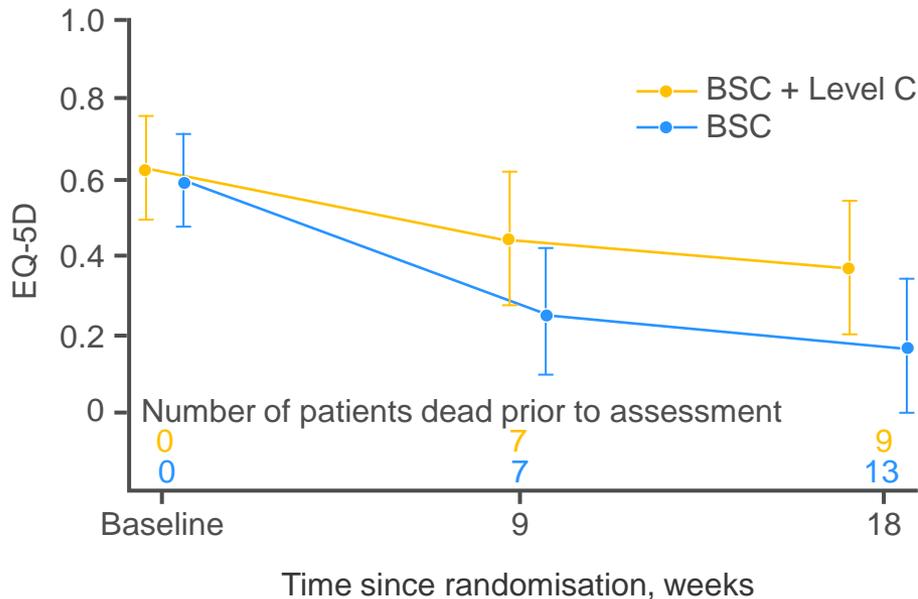
Time to deterioration of fatigue



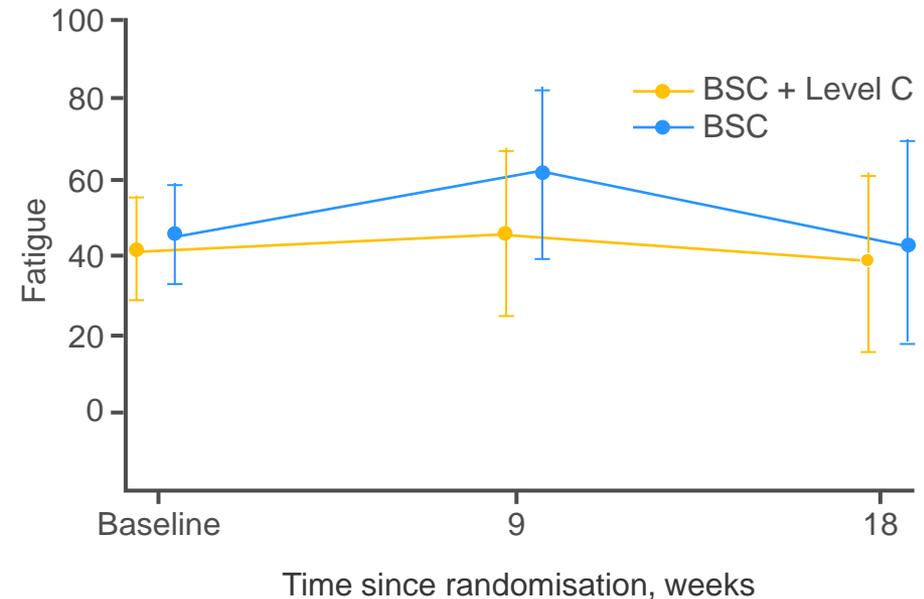
LBA46: Chemotherapy for frail and elderly patients (pts) with advanced gastroesophageal cancer (aGOAC): Quality of life (QoL) results from the GO2 phase III trial – Hall P, et al

Key results (cont.)

Quality of life (EQ-5D)



Fatigue (EORTC)



Conclusion

- In frail and elderly patients with advanced gastroesophageal cancer, the use of low-dose treatment may be used for those unable to receive full-dose regimen without impacting cancer control, QoL, survival or fatigue



CANCERS OF THE PANCREAS, SMALL BOWEL AND HEPATOBIILIARY TRACT



Cancers of the pancreas, small bowel and hepatobiliary tract

PANCREATIC CANCER

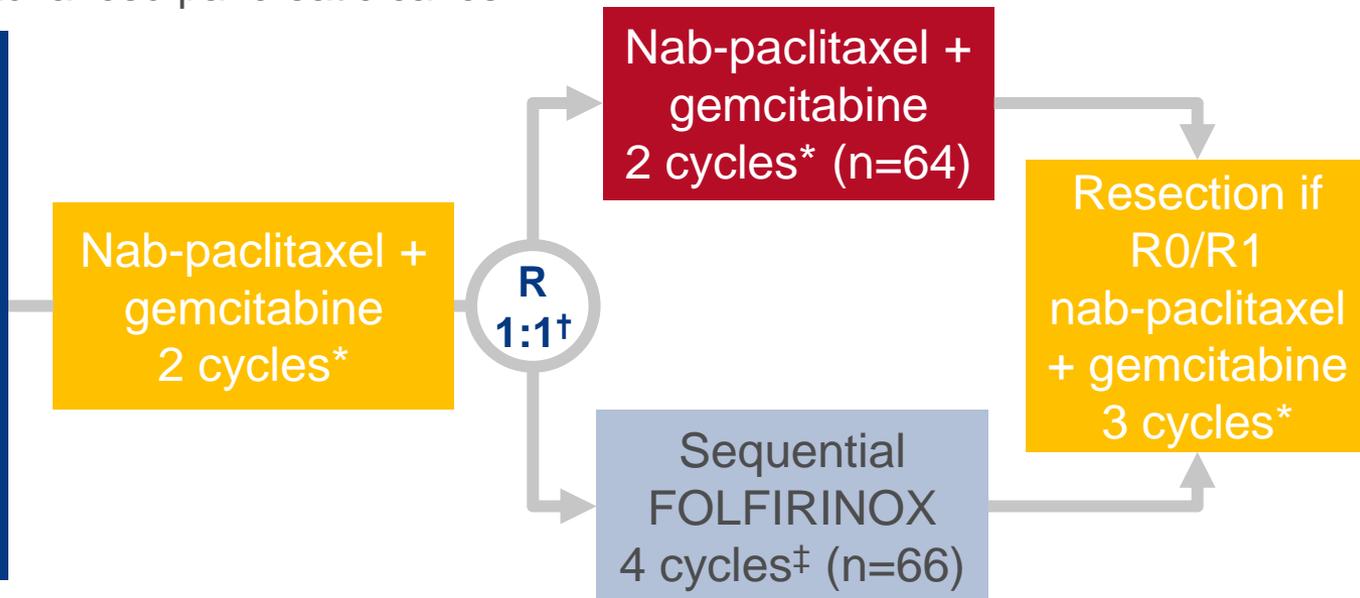
671O: Conversion rate in locally advanced pancreatic cancer (LAPC) after nab-paclitaxel/gemcitabine- or FOLFIRINOX-based induction chemotherapy (NEOLAP) - Final results of a multicenter randomised phase 2 AIO trial – Kunzmann V, et al

Study objective

- To investigate the efficacy and safety of preoperative induction chemotherapy with nab-paclitaxel + gemcitabine followed by nab-paclitaxel + gemcitabine or FOLFIRINOX in patients with locally advanced pancreatic cancer

Key patient inclusion criteria

- Non-resectable locally advanced pancreatic cancer
 - Treatment naive
 - ECOG PS <2
- (n=168)



PRIMARY ENDPOINT

- Conversion rate (R0/R1 resection)

*Nab-paclitaxel 125 mg/m² + gemcitabine 1000 mg on D1, 8, 15 q4w;

†randomised if no progressive disease or unacceptable toxicity;

‡oxaliplatin 85 mg/m², irinotecan 180 mg/m², leucovorin 400 mg/m², 5FU 400 mg/m² bolus then 2400 mg/m² D1 q2w

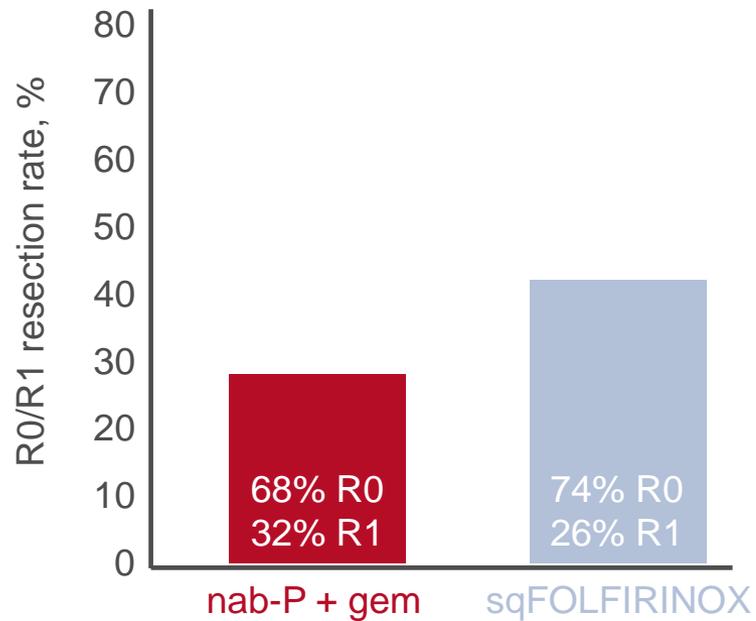
SECONDARY ENDPOINTS

- ORR, DCR, RFS, OS, PFS, safety

671O: Conversion rate in locally advanced pancreatic cancer (LAPC) after nab-paclitaxel/gemcitabine- or FOLFIRINOX-based induction chemotherapy (NEOLAP) - Final results of a multicenter randomised phase 2 AIO trial – Kunzmann V, et al

Key results

Conversion rate



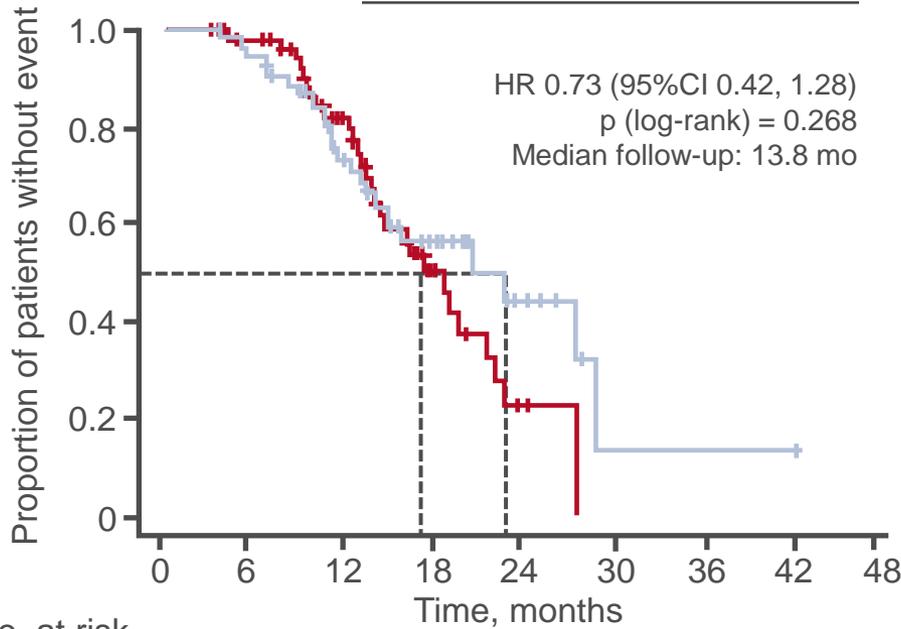
	Events/ N	Resection rate, %	95%CI
nab-P + gem	19/62	30.6	19.6, 43.7
sqFOLFIRINOX	27/60	45.0	32.1, 58.4
Odds ratio 0.54 (95%CI 0.26, 1.13) p=0.135			
Overall (ITT)	46/165	27.9	

671O: Conversion rate in locally advanced pancreatic cancer (LAPC) after nab-paclitaxel/gemcitabine- or FOLFIRINOX-based induction chemotherapy (NEOLAP) - Final results of a multicenter randomised phase 2 AIO trial – Kunzmann V, et al

Key results (cont.)

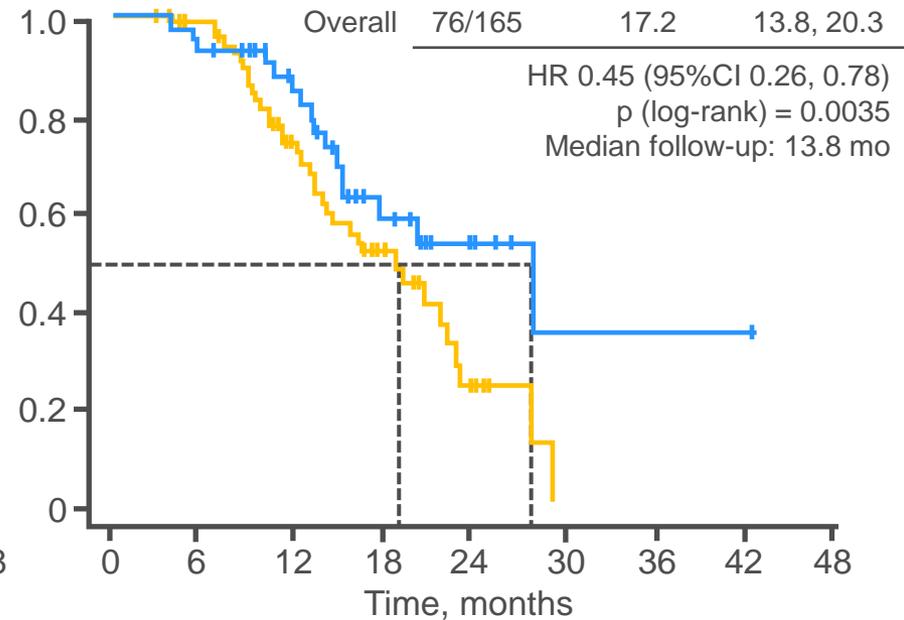
OS

	Events/ N	Median, months	95%CI
FOLFIRINOX	24/60	22.5	14.7, 28.7
nab-P + gem	28/62	17.2	14.2, 21.9



	No. at risk	0	6	12	18	24	30	36	42	48
FOLFIRINOX	60	53	33	16	6	1	1	1	0	
nab-P + gem	62	56	34	12	2	0				

	Events/ N	Median, months	95%CI
Resected (R0/R1)	16/46	27.4	14.7, NR
Not resected	60/119	14.2	12.2, 18.8
Overall	76/165	17.2	13.8, 20.3



	Yes	0	6	12	18	24	30	36	42	48
Yes	46	43	30	14	5	1	1	1	0	
No	76	66	37	16	3	0				

671O: Conversion rate in locally advanced pancreatic cancer (LAPC) after nab-paclitaxel/gemcitabine- or FOLFIRINOX-based induction chemotherapy (NEOLAP) - Final results of a multicenter randomised phase 2 AIO trial – Kunzmann V, et al

Key results (cont.)

Grade ≥3 TEAEs occurring in ≥5%, n (%)	Nab-paclitaxel + gemcitabine (n=64)	Sequential FOLFIRINOX (n=66)
Haematological		
Neutropenia	23 (35.9)	20 (30.3)
Anaemia	4 (6.3)	2 (3.0)
Non-haematological		
Bile duct obstruction without cholangitis	6 (9.4)	7 (10.6)
Nausea/vomiting	2 (3.1)	8 (12.1)
Febrile infections	5 (7.8)	3 (4.5)
Malnutrition (cachexia/inappetence)	-	4 (6.1)
Fatigue/asthenia	2 (3.1)	5 (7.6)

Conclusion

- In patients with locally advanced pancreatic cancer, nab-paclitaxel + gemcitabine followed by FOLFIRINOX demonstrated a higher secondary resection rate that contributed to a doubling in OS compared with nab-paclitaxel + gemcitabine and both regimens were generally well-tolerated

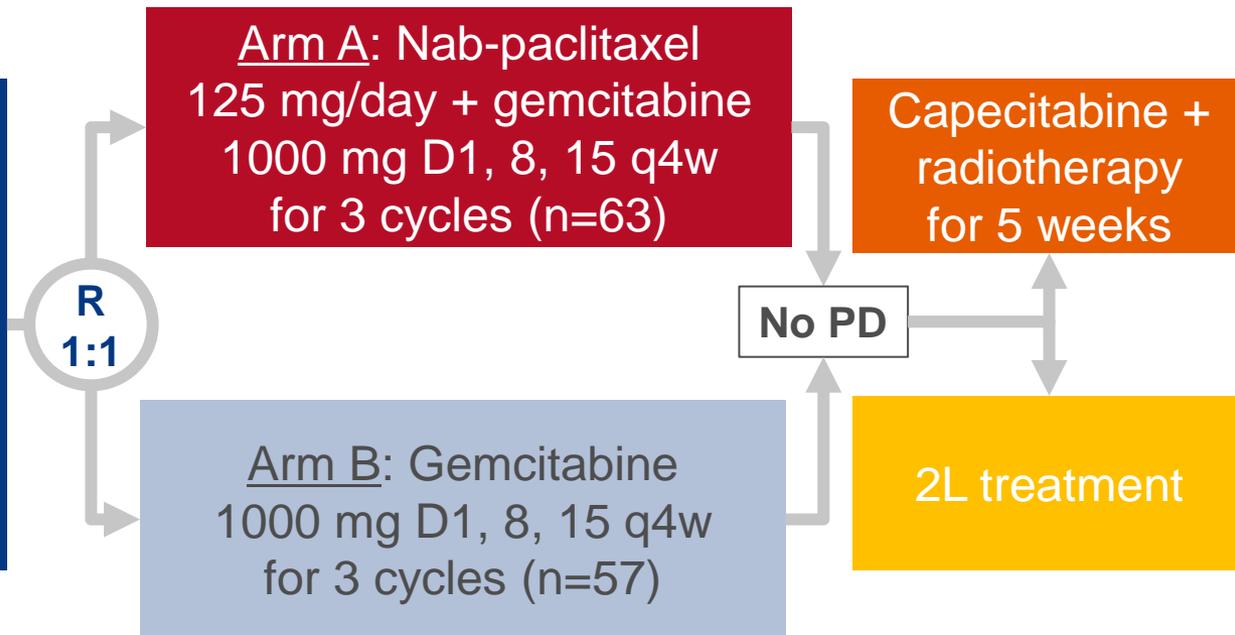
673PD: Nab-paclitaxel (Nab) plus gemcitabine (G) is more effective than G alone in locally advanced, unresectable pancreatic cancer (LAUPC): the GAP trial, a GISCAD phase II comparative randomized trial – Cascinu S, et al

Study objective

- To investigate the efficacy and safety of nab-paclitaxel + gemcitabine in patients with unresectable locally advanced pancreatic cancer

Key patient inclusion criteria

- Unresectable locally advanced pancreatic cancer
 - Treatment naive
 - ECOG PS 0–1
- (n=124)



PRIMARY ENDPOINT

- Disease progression rate (RECIST v1.1) after 3 cycles

SECONDARY ENDPOINTS

- PFS, OS, safety

673PD: Nab-paclitaxel (Nab) plus gemcitabine (G) is more effective than G alone in locally advanced, unresectable pancreatic cancer (LAUPC): the GAP trial, a GISCAD phase II comparative randomized trial – Cascinu S, et al

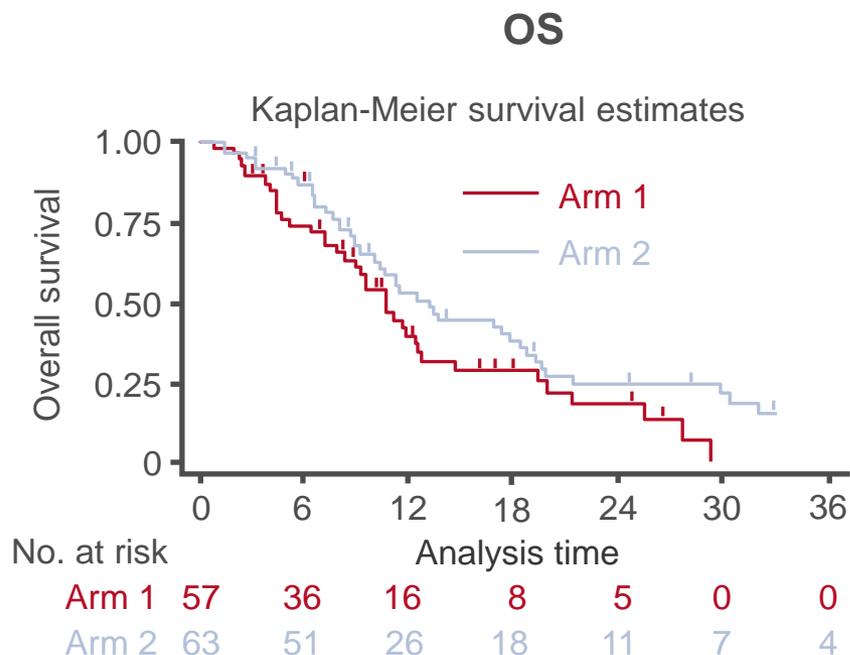
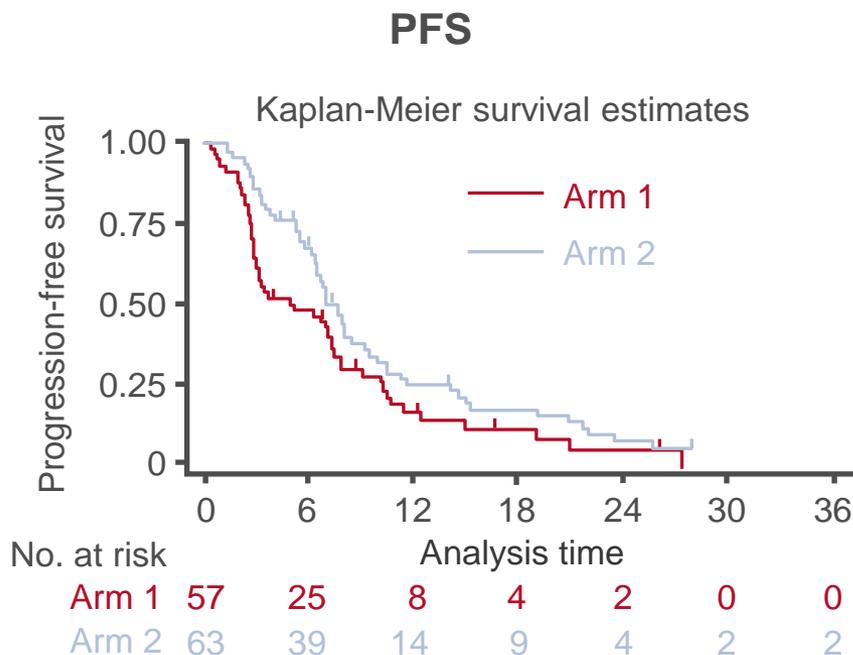
Key results

	Nab-paclitaxel + gemcitabine (n=63)	Gemcitabine (n=57)
Progressive, n (%) [90%CI]	16 (25.4) [16.6, 36.0]*	26 (45.6) [34.3, 57.3]
Distant progression	6 (9.5)	18 (31.6)
Local progression	5 (7.9)	3 (5.3)
Clinical progression/death	5 (7.9)	5 (8.8)
Non-progressive, n (%)	47 (74.6)	31 (54.4)
Responders, n (%) [90%CI]	17 (27.0) [18.0, 37.7]**	3 (5.3) [1.4, 13.0]
PR	17 (27.0)	3 (5.3)
Non-responders, n (%)		
SD	29 (46.0)	27 (47.4)
PD	16 (25.4)	26 (45.6)
NE	1 (1.7)	1 (1.7)

*p=0.01; **p=0.001

673PD: Nab-paclitaxel (Nab) plus gemcitabine (G) is more effective than G alone in locally advanced, unresectable pancreatic cancer (LAUPC): the GAP trial, a GISCAD phase II comparative randomized trial – Cascinu S, et al

Key results (cont.)



Conclusion

- In patients with unresectable, locally advanced pancreatic cancer, nab-paclitaxel + gemcitabine demonstrated lower rates of disease progression and improvements in survival compared with gemcitabine alone and was generally well-tolerated

Cancers of the pancreas, small bowel and hepatobiliary tract

HEPATOCELLULAR CARCINOMA

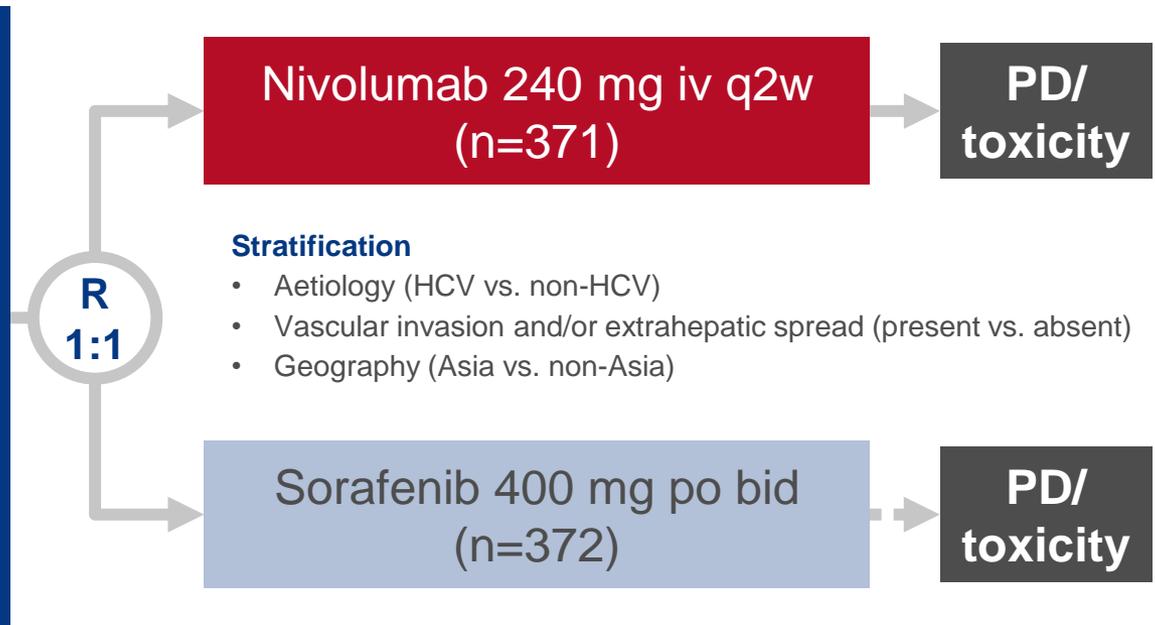
LBA38_PR: CheckMate 459: A randomized, multi-center phase 3 study of nivolumab (NIVO) vs sorafenib (SOR) as first-line (1L) treatment in patients (pts) with advanced hepatocellular carcinoma (aHCC) – Yau T, et al

Study objective

- To investigate the efficacy and safety of nivolumab compared with sorafenib as a 1L treatment for patients with advanced HCC

Key patient inclusion criteria

- Advanced HCC
 - Ineligible for surgery and/or for loco-regional therapy or PD after surgery and/or loco-regional therapy
 - Child-Pugh class A
 - Systemic therapy naïve
 - ECOG PS 0–1
- (n=743)



PRIMARY ENDPOINT

- OS

SECONDARY ENDPOINTS

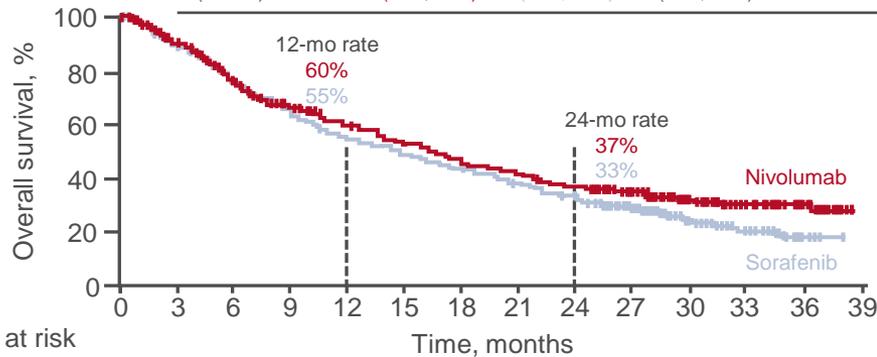
- ORR, PFS, efficacy by PD-L1 status, safety

LBA38_PR: CheckMate 459: A randomized, multi-center phase 3 study of nivolumab (NIVO) vs sorafenib (SOR) as first-line (1L) treatment in patients (pts) with advanced hepatocellular carcinoma (aHCC) – Yau T, et al

Key results

OS

	Nivolumab (n=371)	Sorafenib (n=372)	HR (95%CI)	p-value
mOS, months (95%CI)	16.4 (13.9, 18.4)	14.7 (11.9, 17.2)	0.85 (0.72, 1.02)	0.0752

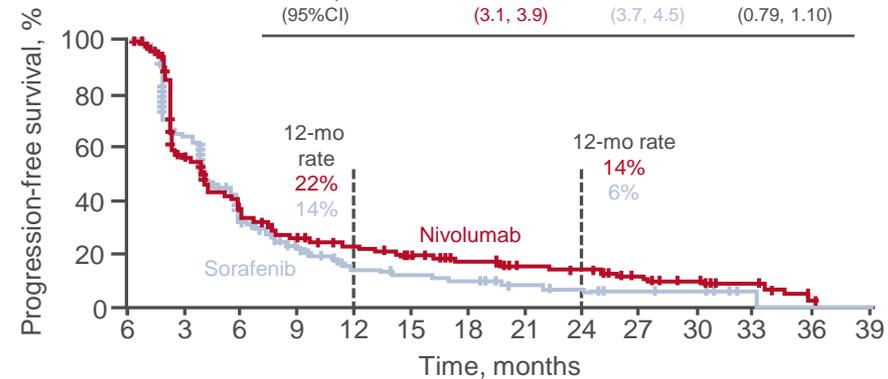


No. at risk

	0	3	6	9	12	15	18	21	24	27	30	33	36	39
Nivolumab	371	326	271	235	211	187	165	146	129	104	63	39	17	0
Sorafenib	372	328	274	232	196	174	155	133	115	80	47	30	7	0

PFS

	Nivolumab (n=371)	Sorafenib (n=372)	HR (95%CI)
mPFS, months (95%CI)	3.7 (3.1, 3.9)	3.8 (3.7, 4.5)	0.93 (0.79, 1.10)



	6	9	12	15	18	21	24	27	30	33	36	39		
Nivolumab	371	193	110	84	68	56	46	36	32	19	11	7	1	0
Sorafenib	372	207	87	55	32	26	21	14	10	6	5	0	0	0

LBA38_PR: CheckMate 459: A randomized, multi-center phase 3 study of nivolumab (NIVO) vs sorafenib (SOR) as first-line (1L) treatment in patients (pts) with advanced hepatocellular carcinoma (aHCC) – Yau T, et al

Key results (cont.)

	Nivolumab	Sorafenib	HR (95%CI)
mOS, months			
PD-L1 ≥1%	16.1	8.6	0.80 (0.54, 1.19)
PD-L1 <1%	16.7	15.2	0.84 (0.69, 1.02)
ORR, n (%)			
PD-L1 ≥1%	20 (28)	6 (9)	
PD-L1 <1%	36 (12)	20 (7)	

	Nivolumab (n=371)	Sorafenib (n=372)
ORR, n (%)	57 (15)	26 (7)
CR	14 (4)	5 (1)
PR	43 (12)	21 (6)
SD	130 (35)	180 (48)
Non-CR/non-PD	16 (4)	9 (2)
PD	136 (37)	105 (28)
NE	32 (9)	52 (14)
DCR, n (%)	203 (55)	215 (58)
Median duration of disease control, months (95%CI)	7.5 (6.5, 10.7)	5.7 (5.6, 7.4)
Median TTR, months (range)	3.3 (1.6–19.4)	3.7 (1.5–11.1)
Median DoR, months (range)	23.3 (3.1–35.5+)	23.4 (1.9+–28.7+)

LBA38_PR: CheckMate 459: A randomized, multi-center phase 3 study of nivolumab (NIVO) vs sorafenib (SOR) as first-line (1L) treatment in patients (pts) with advanced hepatocellular carcinoma (aHCC) – Yau T, et al

Key results (cont.)

Select grade 3–4 TRAEs, n (%)	Nivolumab (n=371)	Sorafenib (n=372)
Skin	7 (2)	66 (18)
Hepatic	35 (10)	26 (7)
Endocrine	4 (1)	0 (0)
Gastrointestinal	6 (2)	18 (5)
Hypersensitivity/infusion reaction	1 (0.3)	0 (0)
Pulmonary	5 (1)	0 (0)
Renal	1 (0.3)	2 (1)

Conclusion

- In patients with advanced HCC, 1L nivolumab did not provide a significant improvement in OS compared with sorafenib although had a manageable safety profile

LBA39: Randomised efficacy and safety results for atezolizumab (Atezo) + bevacizumab (Bev) in patients (pts) with previously untreated, unresectable hepatocellular carcinoma (HCC) – Lee M, et al

Study objective

- To investigate the efficacy and safety of atezolizumab + bevacizumab as a 1L treatment in patients with unresectable HCC

Key patient inclusion criteria

- Advanced HCC
 - Child-Pugh up to class B7 for Arm A and class A for Arm F
 - Systemic therapy naïve
 - ECOG PS 0–1
- (n=743)

Stratification

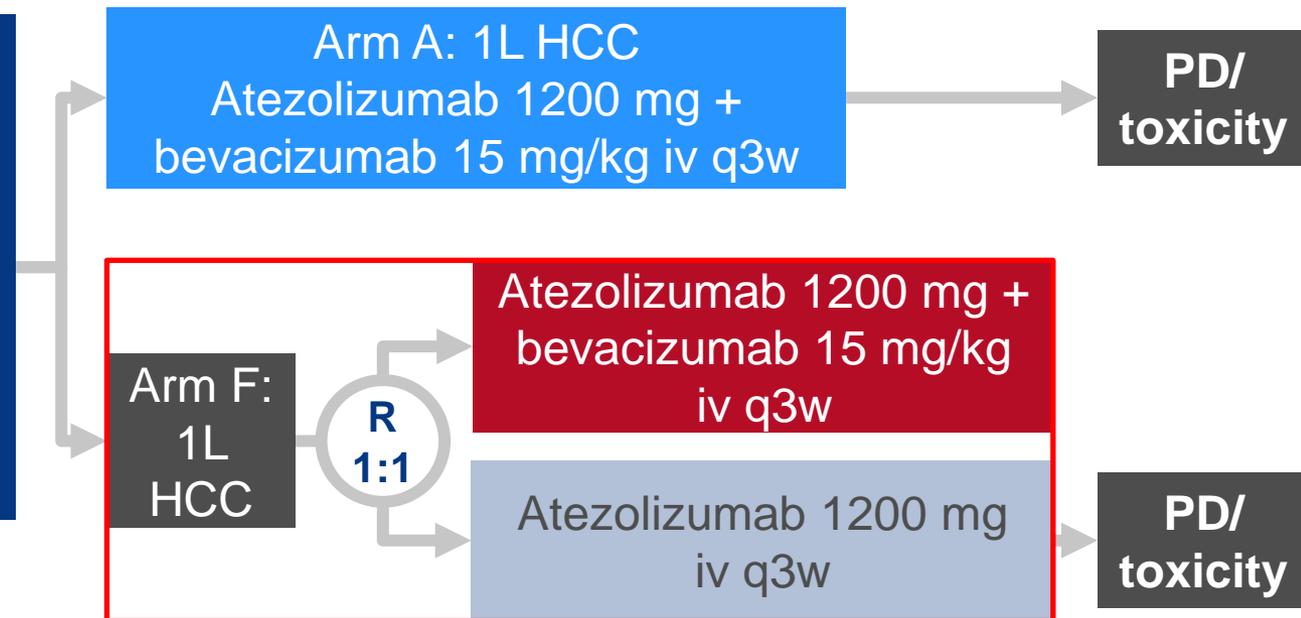
- AFP level (<400 vs. ≥400 ng/mL)
- Macrovascular invasion and/or extrahepatic spread (present vs. absent)
- Geography (Asia excluding Japan vs. rest of world)

PRIMARY ENDPOINTS

- Arm A: ORR (RECIST v1.1)
- Arm F: PFS (RECIST v1.1)

SECONDARY ENDPOINTS

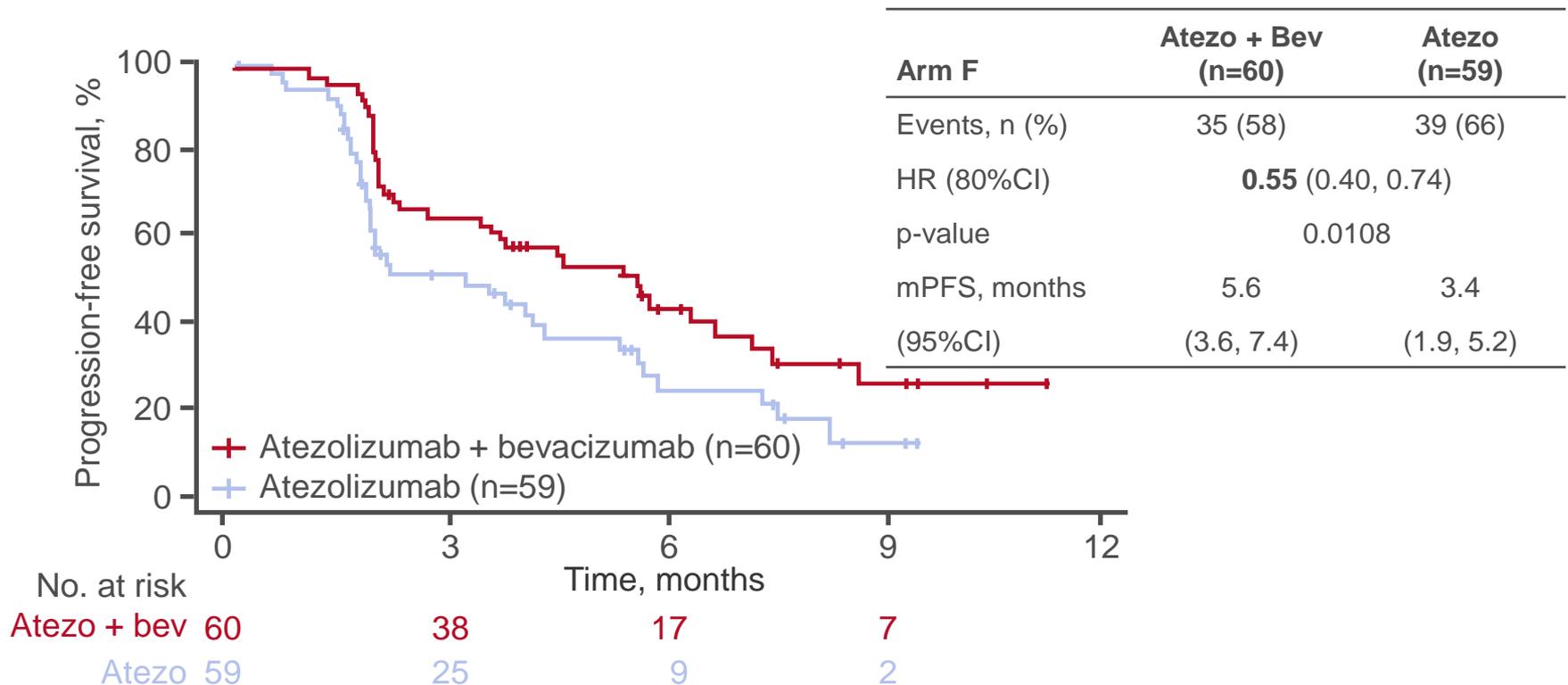
- OS, safety



LBA39: Randomised efficacy and safety results for atezolizumab (Atezo) + bevacizumab (Bev) in patients (pts) with previously untreated, unresectable hepatocellular carcinoma (HCC) – Lee M, et al

Key results

PFS



LBA39: Randomised efficacy and safety results for atezolizumab (Atezo) + bevacizumab (Bev) in patients (pts) with previously untreated, unresectable hepatocellular carcinoma (HCC) – Lee M, et al

Key results (cont.)

	Arm A	Arm F	
	Atezolizumab + bevacizumab (n=104)	Atezolizumab + bevacizumab (n=60)	Atezolizumab (n=59)
Confirmed ORR, n (%)	37 (46)	12 (20)	10 (17)
CR	12 (12)	1 (2)	3 (5)
PR	25 (24)	11 (18)	7 (12)
SD	37 (36)	28 (47)	19 (32)
PD	25 (24)	17 (28)	25 (42)
Non-CR/non-PD	-	0 (0)	1 (2)
DCR, n (%)	74 (71)	40 (67)	29 (49)
Median DoR, months (95%CI)	NE (11.8, NE)	NE (NE, NE)	NE (3.7, NE)
mPFS, months (95%CI)	7.3 (5.4, 9.9)		
6-month rate, %	54		
12-month rate, %	35		
mOS, months (95%CI)	17.1 (13.8, NE)		
6-month rate, %	82		
12-month rate, %	63		

LBA39: Randomised efficacy and safety results for atezolizumab (Atezo) + bevacizumab (Bev) in patients (pts) with previously untreated, unresectable hepatocellular carcinoma (HCC) – Lee M, et al

Key results (cont.)

Grade 3–4 AEs in Arm F, n (%)	Atezolizumab + bevacizumab (n=60)	Atezolizumab (n=58)
Proteinuria	3 (5)	0 (0)
Diarrhoea	1 (2)	0 (0)
Hypertension	5 (5)	1 (2)

Grade 3–4 SAEs in Arm F, n (%)	Atezolizumab + bevacizumab (n=60)	Atezolizumab (n=58)
Pneumonia	1 (2)	0 (0)
Fracture	0 (0)	1 (2)

Conclusion

- In patients with previously untreated, unresectable HCC, the combination of atezolizumab + bevacizumab had a manageable safety profile and demonstrated significant improvement in PFS compared with atezolizumab alone along with the highest reported mOS to date

Cancers of the pancreas, small bowel and hepatobiliary tract

BILIARY TRACT CANCER

LBA10_PR: ClarIDHy: A global, phase III, randomized, double-blind study of ivosidenib (IVO) vs placebo in patients with advanced cholangiocarcinoma (CC) with an isocitrate dehydrogenase 1 (IDH1) mutation

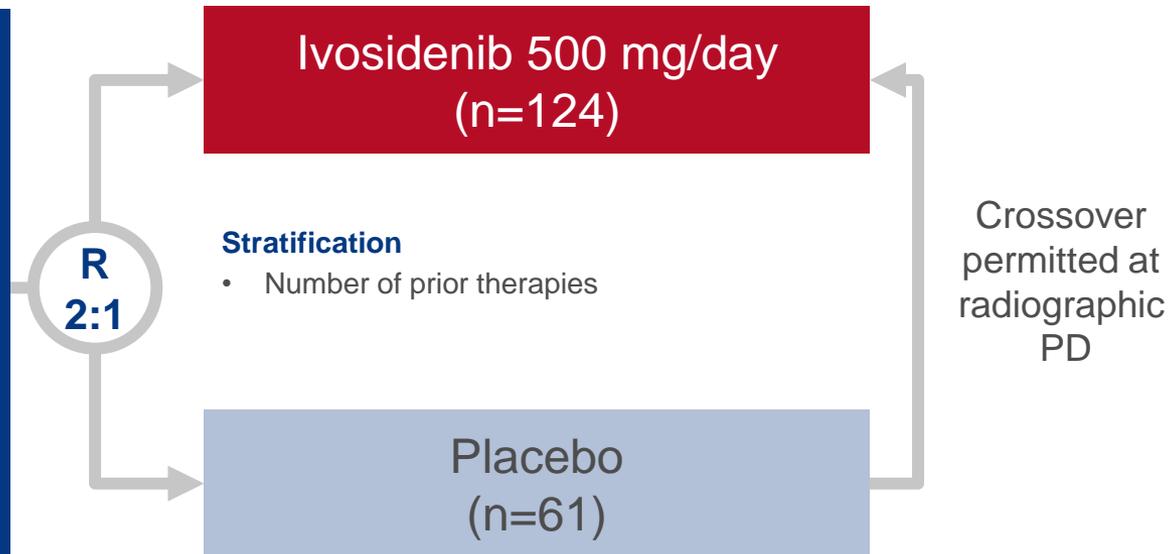
– Abou-Alfa GK, et al

Study objective

- To investigate the efficacy and safety of ivosidenib in patients with advanced cholangiocarcinoma and IDH1 mutation

Key patient inclusion criteria

- Advanced cholangiocarcinoma
 - IDH1 mutation status by NGS
 - 1–2 prior therapies (at least 1 gemcitabine or 5FU-containing regimen)
 - ECOG PS 0–1
- (n=185)



PRIMARY ENDPOINT

- PFS

SECONDARY ENDPOINTS

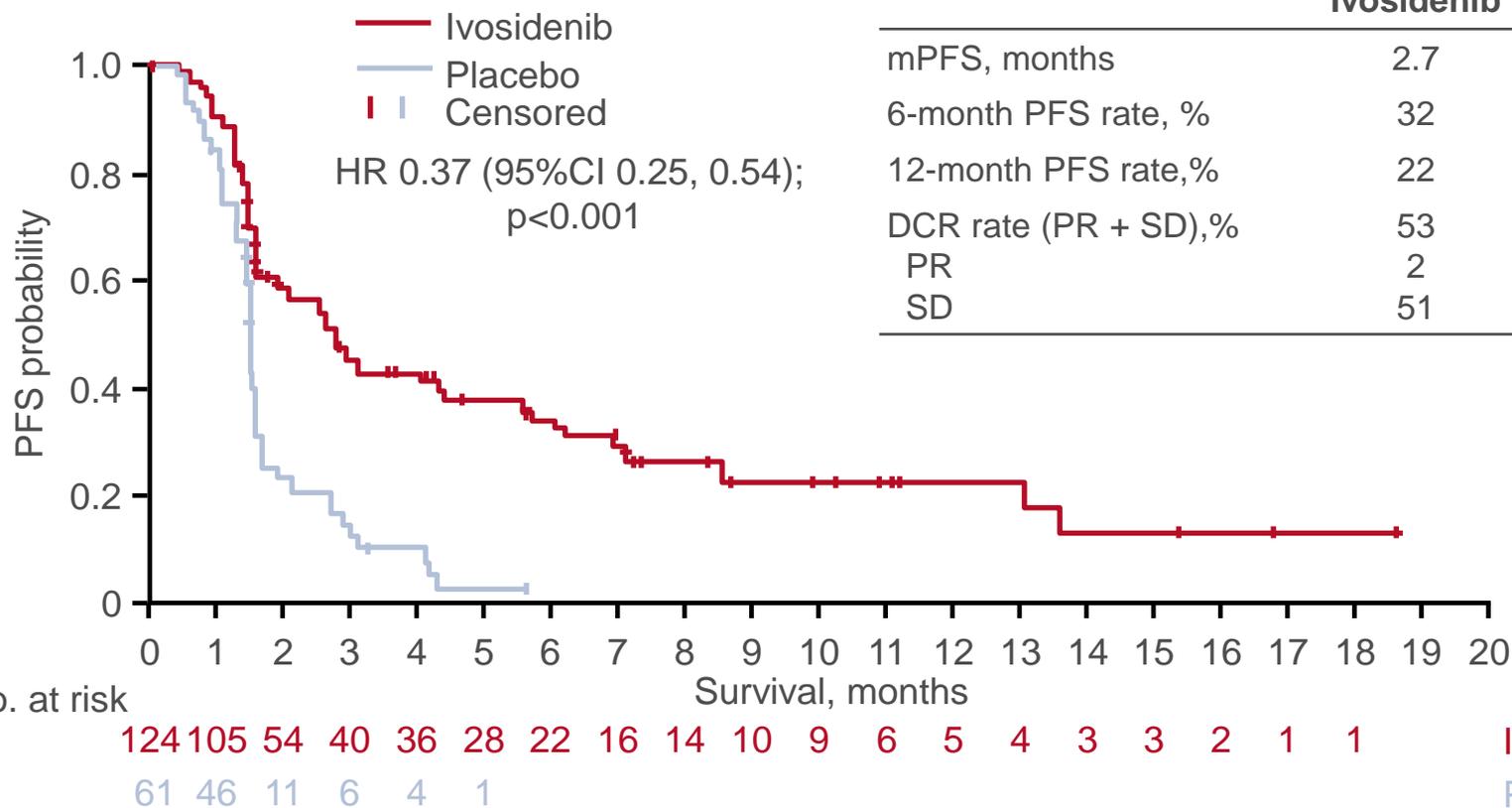
- OS, ORR, QoL, safety

LBA10_PR: ClarIDHy: A global, phase III, randomized, double-blind study of ivosidenib (IVO) vs placebo in patients with advanced cholangiocarcinoma (CC) with an isocitrate dehydrogenase 1 (IDH1) mutation

– Abou-Alfa GK, et al

Key results

PFS



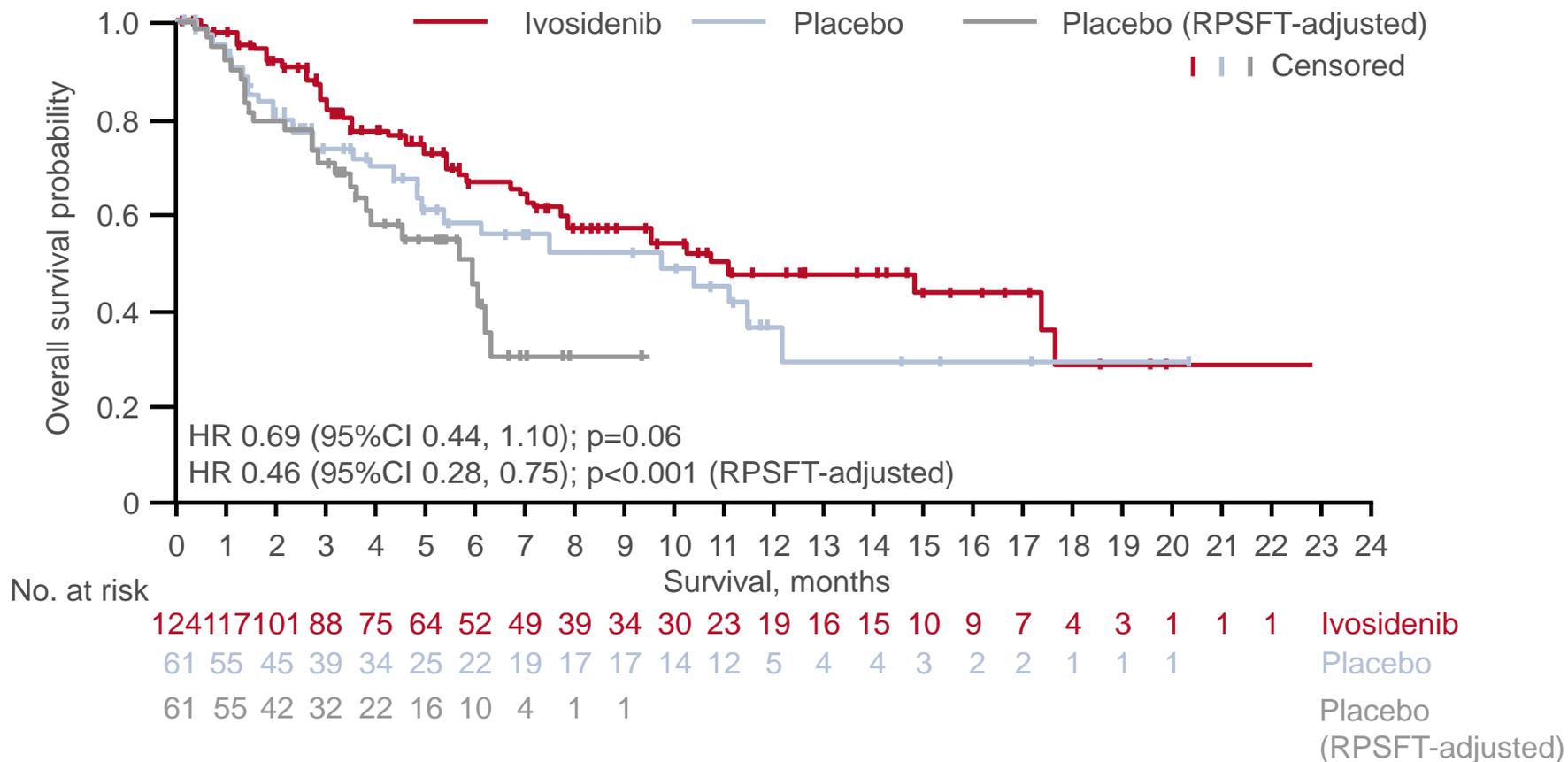
	Ivosidenib	Placebo
mPFS, months	2.7	1.4
6-month PFS rate, %	32	NE
12-month PFS rate, %	22	NE
DCR rate (PR + SD), %	53	28
PR	2	0
SD	51	28

LBA10_PR: ClarIDHy: A global, phase III, randomized, double-blind study of ivosidenib (IVO) vs placebo in patients with advanced cholangiocarcinoma (CC) with an isocitrate dehydrogenase 1 (IDH1) mutation

– Abou-Alfa GK, et al

Key results (cont.)

OS



LBA10_PR: ClarIDHy: A global, phase III, randomized, double-blind study of ivosidenib (IVO) vs placebo in patients with advanced cholangiocarcinoma (CC) with an isocitrate dehydrogenase 1 (IDH1) mutation

– Abou-Alfa GK, et al

Key results (cont.)

Most common TEAEs, n (%)	Ivosidenib (n=121)	Placebo (n=59)
Nausea	43 (35.5)	15 (25.4)
Diarrhoea	37 (30.6)	9 (15.3)
Fatigue	32 (26.4)	10 (16.9)
Cough	25 (20.7)	5 (8.5)
Abdominal pain	26 (21.5)	8 (13.6)
Ascites	25 (20.7)	9 (15.3)
Decreased appetite	23 (19.0)	11 (18.6)
Anaemia	18 (14.9)	3 (5.1)
Vomiting	23 (19.0)	10 (16.9)

Conclusion

- In patients with advanced cholangiocarcinoma and IDH1 mutation, ivosidenib demonstrated a significant improvement in PFS as well as in OS after adjustment for crossover and had a manageable safety profile

LBA40: FIGHT-202: A phase II study of pemigatinib in patients (pts) with previously treated locally advanced or metastatic cholangiocarcinoma (CCA) – Vogel A, et al

Study objective

- To investigate the efficacy and safety of pemigatinib in patients with locally advanced or metastatic cholangiocarcinoma

Key patient inclusion criteria

- Locally advanced or metastatic cholangiocarcinoma
 - Known FGF/FGFR status
 - ECOG PS ≤ 2
- (n=146)

Cohort A: FGFR2 fusions/rearrangements (n=107)

Cohort B: Other FGF/FGFR genetic alterations (n=20)

Cohort C: No FGF/FGFR genetic alterations (n=18)

Pemigatinib 13.5 mg/day (2-weeks on/1-week off)

PRIMARY ENDPOINT

- ORR

SECONDARY ENDPOINTS

- DoR, DCR, PFS, OS, safety

LBA40: FIGHT-202: A phase II study of pemigatinib in patients (pts) with previously treated locally advanced or metastatic cholangiocarcinoma (CCA) – Vogel A, et al

Key results

	Cohort A (n=107)	Cohort B (n=20)	Cohort C (n=18)
ORR, % (95%CI)	35.5 (26.50, 45.35)	0	0
Response, n (%)			
CR	3 (2.8)	0	0
PR	35 (32.7)	0	0
SD	50 (46.7)	8 (40.0)	4 (22.2)
PD	16 (15.0)	7 (35.0)	11 (61.1)
NE	3 (2.8)	5 (25.0)	3 (16.7)
Median DoR, months (95%CI)	7.5 (5.7, 14.5)	-	-
DCR, % (95%CI)	82 (74, 89)	40 (19, 64)	22 (6, 48)

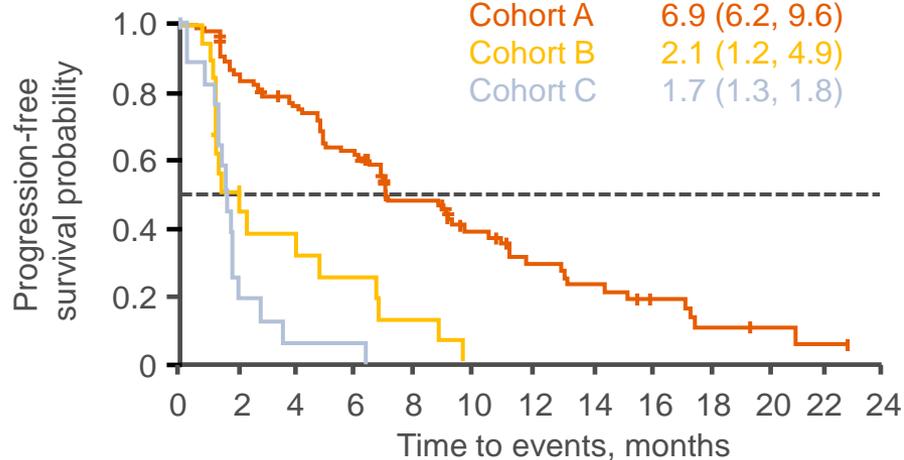
LBA40: FIGHT-202: A phase II study of pemigatinib in patients (pts) with previously treated locally advanced or metastatic cholangiocarcinoma (CCA) – Vogel A, et al

Key results (cont.)

PFS

mPFS, months (95%CI)

Cohort A 6.9 (6.2, 9.6)
 Cohort B 2.1 (1.2, 4.9)
 Cohort C 1.7 (1.3, 1.8)



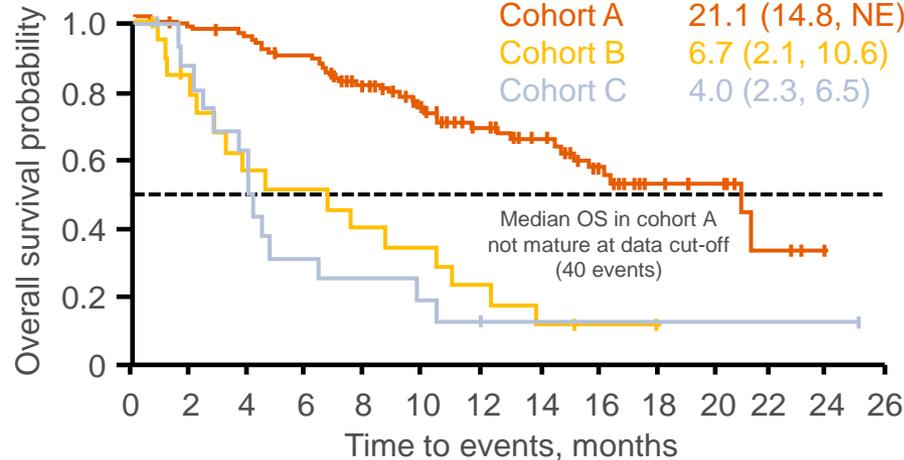
No. at risk

A	107	88	76	61	37	22	14	11	7	4	2	1	0
B	20	9	6	4	2	0	0	0	0	0	0	0	0
C	18	3	1	1	0	0	0	0	0	0	0	0	0

OS

mOS, months (95%CI)

Cohort A 21.1 (14.8, NE)
 Cohort B 6.7 (2.1, 10.6)
 Cohort C 4.0 (2.3, 6.5)



A	107	102	99	92	73	52	41	34	24	12	9	3	0	0
B	20	14	10	9	7	6	4	2	1	1	0	0	0	0
C	18	13	8	5	4	3	1	1	1	1	1	1	1	0

	Cohort A	Cohort B	Cohort C
Median duration of follow-up, months (range)	15.4 (7.0–24.7)	19.9 (16.2–23.5)	24.2 (22.0–26.1)
Median duration of treatment, months (range)	7.2 (0.2–24.0)	1.4 (0.2–12.9)	1.3 (0.2–4.7)

LBA40: FIGHT-202: A phase II study of pemigatinib in patients (pts) with previously treated locally advanced or metastatic cholangiocarcinoma (CCA) – Vogel A, et al

Key results (cont.)

Grade ≥ 3 AEs occurring in $\geq 2\%$, n (%)	n=146
Diarrhoea	4 (3)
Fatigue	7 (5)
Nail toxicities	3 (2)
Nausea	3 (2)
Stomatitis	8 (5)
Arthralgia	9 (6)

Conclusion

- In patients with previously treated locally advanced or metastatic cholangiocarcinoma and FGFR2 fusions or rearrangements, pemigatinib demonstrated durable responses with a manageable safety profile

Cancers of the pancreas, small bowel and hepatobiliary tract

NEUROENDOCRINE TUMOUR

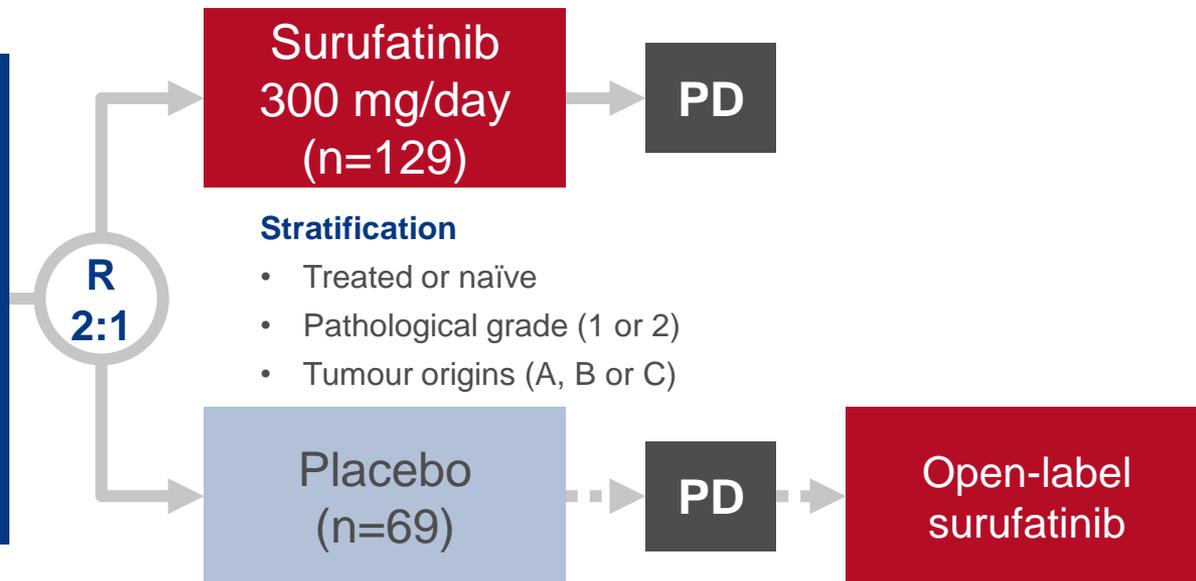
LBA76: Efficacy and safety of surufatinib in patients with well-differentiated advanced extrapancreatic neuroendocrine tumors (NETs): results from the randomized phase III study (SANET-ep) – Xu J, et al

Study objective

- To investigate the efficacy and safety of surufatinib in patients with well-differentiated advanced extrapancreatic NETs

Key patient inclusion criteria

- Well-differentiated extrapancreatic NET
- Progressed on ≤ 2 prior systemic therapies
- No progression on prior VEGFR/VEGFR inhibitors (n=198)



PRIMARY ENDPOINT

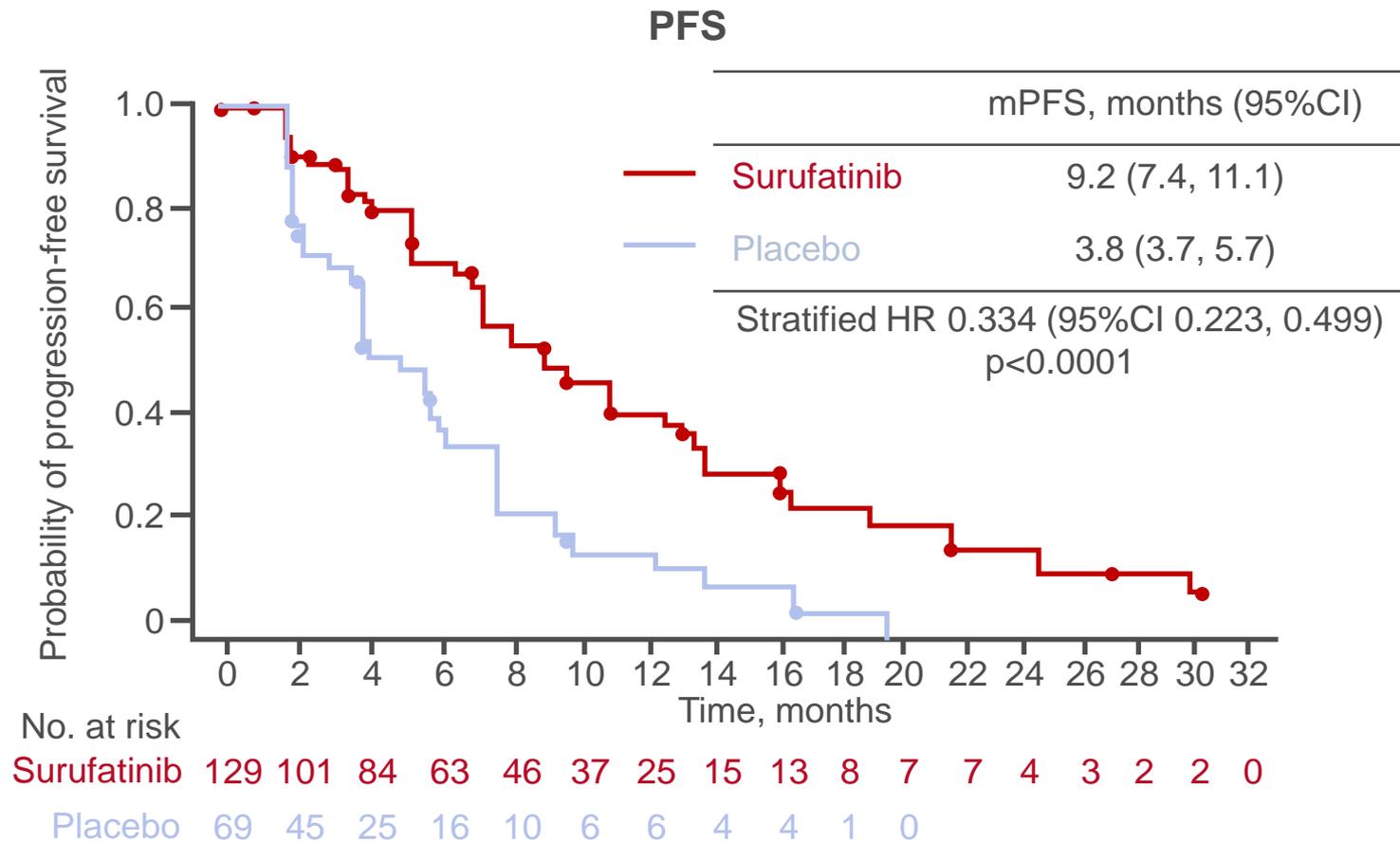
- Investigator-assessed PFS

SECONDARY ENDPOINTS

- ORR, DCR, DoR, TTR, OS, safety

LBA76: Efficacy and safety of surufatinib in patients with well-differentiated advanced extrapancreatic neuroendocrine tumors (NETs): results from the randomized phase III study (SANET-ep) – Xu J, et al

Key results



LBA76: Efficacy and safety of surufatinib in patients with well-differentiated advanced extrapancreatic neuroendocrine tumors (NETs): results from the randomized phase III study (SANET-ep) – Xu J, et al

Key results (cont.)

Response	Surufatinib (n=126)	Placebo (n=64)	OR	p-value
PR, n (%)	13 (10.3)	0 (0)	-	-
SD, n (%)	96 (76.2)	42 (65.6)	-	-
PD, n (%)	13 (10.3)	18 (28.1)	-	-
NE, n (%)	4 (3.2)	4 (6.3)	-	-
ORR, % (95CI)	10.3 (5.6, 17.0)	0	-	0.0051
DCR, % (95%CI)	86.5 (79.3, 91.9)	65.6 (52.7, 77.1)	3.3 (1.5, 7.3)	0.0022
TTR, months (95%CI)	3.7 (1.8, 5.5)	-	-	-
DoR, months (95%CI)	5.6 (2.0, 17.5)	-	-	-

LBA76: Efficacy and safety of surufatinib in patients with well-differentiated advanced extrapancreatic neuroendocrine tumors (NETs): results from the randomized phase III study (SANET-ep) – Xu J, et al

Key results (cont.)

Grade \geq 3 TEAEs, n (%)	Surufatinib (n=129)	Placebo (n=68)
Proteinuria	25 (19.4)	0 (0)
Hypertension	47 (36.4)	9 (13.2)
Diarrhoea	2 (1.6)	0 (0)
Blood bilirubin increased	3 (2.3)	0 (0)
AST increased	5 (3.9)	2 (2.9)
Hypertriglyceridemia	3 (2.3)	0 (0)
ALT increased	4 (3.1)	0 (0)
Upper abdominal pain	1 (0.8)	0 (0)
Anaemia	9 (7.0)	2 (2.9)

Conclusion

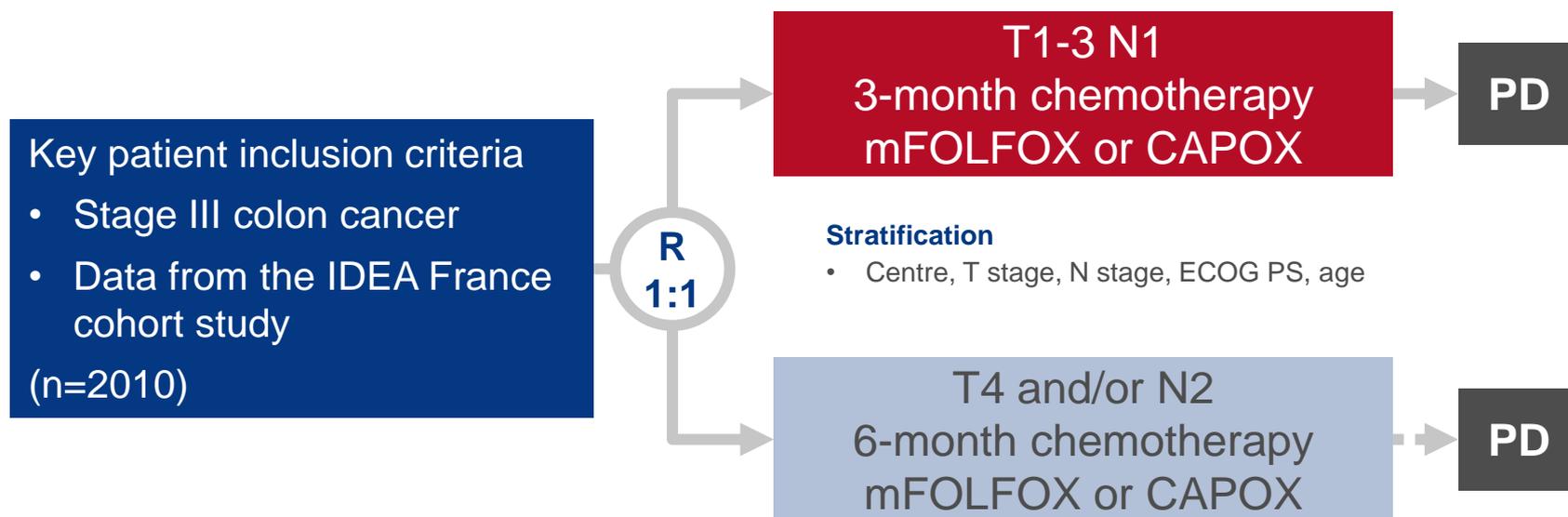
- In patients with previously treated well-differentiated advanced extrapancreatic NETs, surufatinib demonstrated significant improvement in PFS and was generally well-tolerated

CANCERS OF THE COLON, RECTUM AND ANUS

LBA30_PR: Analysis of circulating tumor DNA (ctDNA) from patients enrolled in the IDEA-FRANCE phase III trial: prognostic and predictive value for adjuvant treatment duration – Taieb J, et al

Study objective

- To investigate whether ctDNA can be used as a prognostic or predictive marker for determining intensity and duration of adjuvant treatment



PRIMARY ENDPOINT

- DFS

*Digital pathology is used to quantify the densities of CD3+ and cytotoxic CD8+ T cells in core tumour and invasive margin and converted to predefined cut-offs and grouped as either low, intermediate or high or as low or intermediate + high or as a continuous score

SECONDARY ENDPOINT

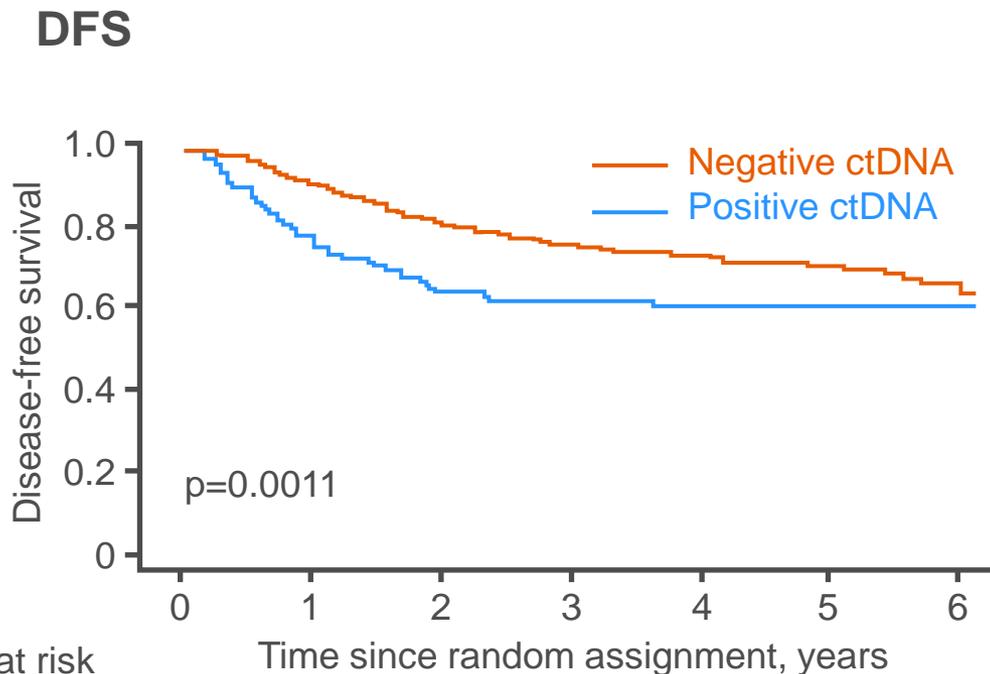
- Safety

LBA30_PR: Analysis of circulating tumor DNA (ctDNA) from patients enrolled in the IDEA-FRANCE phase III trial: prognostic and predictive value for adjuvant treatment duration – Taieb J, et al

Key results

	DFS rate, %	95%CI
Negative ctDNA	82.39	79.32, 85.05
Positive ctDNA	64.12	54.19, 72.44

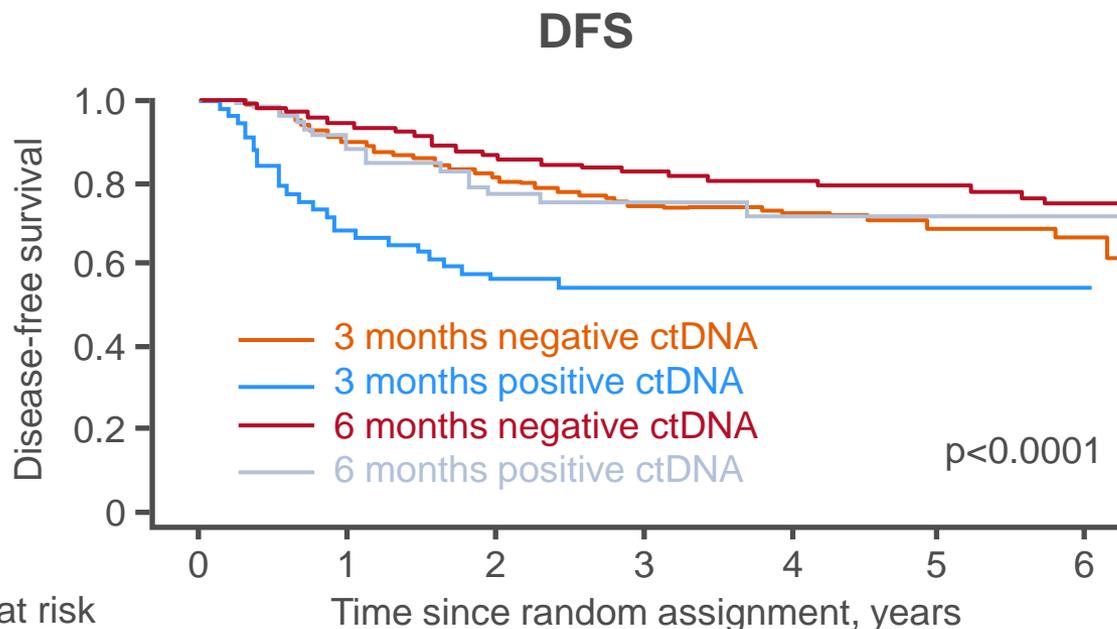
Positive vs. negative
HR 1.85 (95%CI 1.31, 2.61); $p < 0.001$



	No. at risk						
	0	1	2	3	4	5	6
Negative ctDNA	696	630	549	432	277	131	42
Positive ctDNA	109	83	66	58	37	15	4

LBA30_PR: Analysis of circulating tumor DNA (ctDNA) from patients enrolled in the IDEA-FRANCE phase III trial: prognostic and predictive value for adjuvant treatment duration – Taieb J, et al

Key results (cont.)



	0	1	2	3	4	5	6
3-mo negative ctDNA	346	309	269	204	134	60	19
3-mo positive ctDNA	56	37	30	27	18	4	1
6-mo negative ctDNA	350	321	280	228	143	71	23
6-mo positive ctDNA	53	46	36	31	19	11	3

LBA30_PR: Analysis of circulating tumor DNA (ctDNA) from patients enrolled in the IDEA-FRANCE phase III trial: prognostic and predictive value for adjuvant treatment duration – Taieb J, et al

Key results (cont.)

- In a multivariate analysis, positive vs. negative ctDNA ($p=0.0005$), N2 vs. N1 ($p<0.0001$) and 6- vs. 3-months of treatment ($p=0.0002$) were the only factors that were significantly different

Conclusion

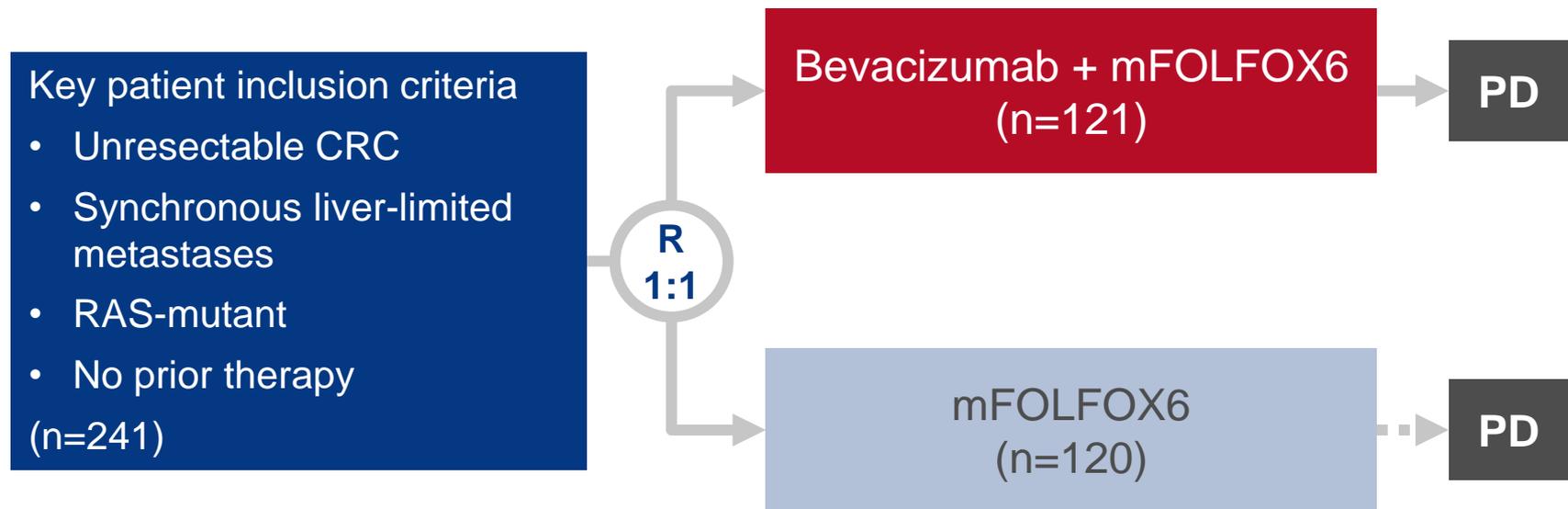
- **In patients with stage III colon cancer, ctDNA can be used as an independent prognostic marker and those patients who were ctDNA-positive had poorer outcomes with 3 months of treatment**

LBA31: Bevacizumab plus chemotherapy versus chemotherapy alone as first-line treatment for patients with RAS mutant unresectable colorectal liver-limited metastases - A single center randomized control trial

– Xu J, et al

Study objective

- To investigate the efficacy and safety of bevacizumab + chemotherapy as a 1L treatment for patients with RAS-mutant unresectable CRC with liver-limited metastases



PRIMARY ENDPOINT

- Conversion rate for liver metastases

SECONDARY ENDPOINTS

- ORR, PFS, OS, safety

LBA31: Bevacizumab plus chemotherapy versus chemotherapy alone as first-line treatment for patients with RAS mutant unresectable colorectal liver-limited metastases - A single center randomized control trial

– Xu J, et al

Key results (cont.)

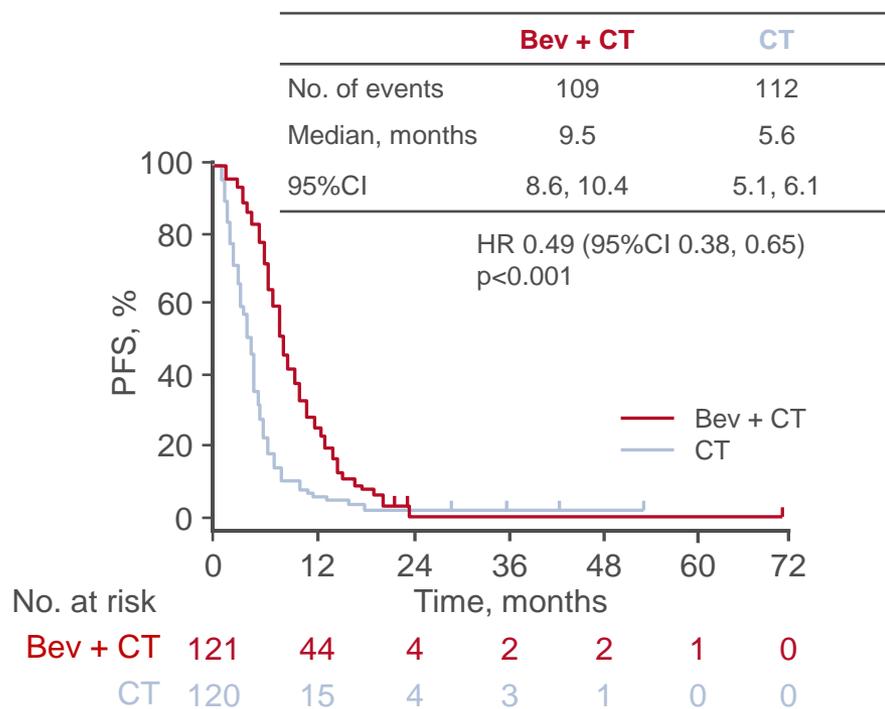
	Bevacizumab + mFOLFOX6 (n=121)	mFOLFOX6 (n=120)	p-value
Conversion resection rate, n (%)			
Theoretical R0 resection	28 (23.1)	8 (6.7)	<0.001
Actual R0 resection	27 (22.3)	7 (5.8)	<0.001
Response, n (%)			
CR	1 (0.8)	1 (0.8)	
PR	65 (53.7)	43 (35.8)	
SD	38 (31.4)	34 (28.3)	
PD	16 (13.2)	41 (34.2)	
NE	1 (0.8)	1 (0.8)	
ORR (CR + PR)	66 (54.4)	44 (36.7)	<0.001

LBA31: Bevacizumab plus chemotherapy versus chemotherapy alone as first-line treatment for patients with RAS mutant unresectable colorectal liver-limited metastases - A single center randomized control trial

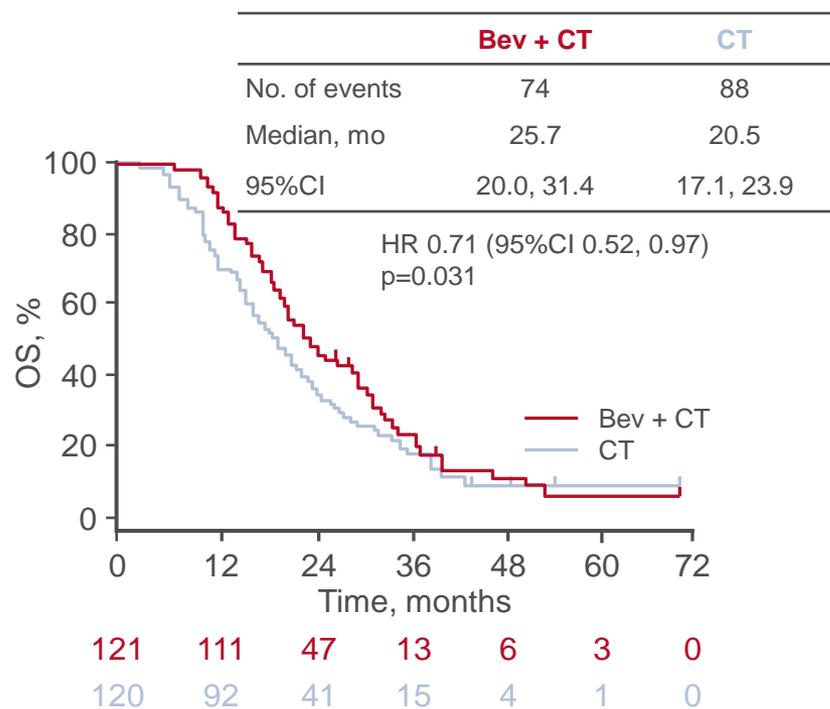
- Xu J, et al

Key results

PFS



OS



LBA31: Bevacizumab plus chemotherapy versus chemotherapy alone as first-line treatment for patients with RAS mutant unresectable colorectal liver-limited metastases - A single center randomized control trial

– Xu J, et al

Key results (cont.)

Grade ≥3 AEs, occurring in ≥5%, n (%)	Bevacizumab + mFOLFOX6 (n=121)	mFOLFOX6 (n=120)	p-value
Leukopenia/neutropenia	17 (14.1)	15 (12.5)	
Thrombocytopenia	8 (6.6)	6 (5.0)	
Nausea/vomiting	5 (4.1)	7 (5.8)	
Peripheral neuropathy	6 (5.0)	7 (5.8)	
Hypertension	10 (8.3)	3 (2.5)	0.048
Proteinuria	12 (9.9)	4 (3.3)	0.040

Conclusion

- In patients with unresectable CRC with liver-limited metastases, bevacizumab + mFOLFOX6 demonstrated significant improvements in conversional resection rate for liver metastases as well as survival outcomes compared with mFOLFOX6 alone although there were higher rates of hypertension and proteinuria in the combination arm

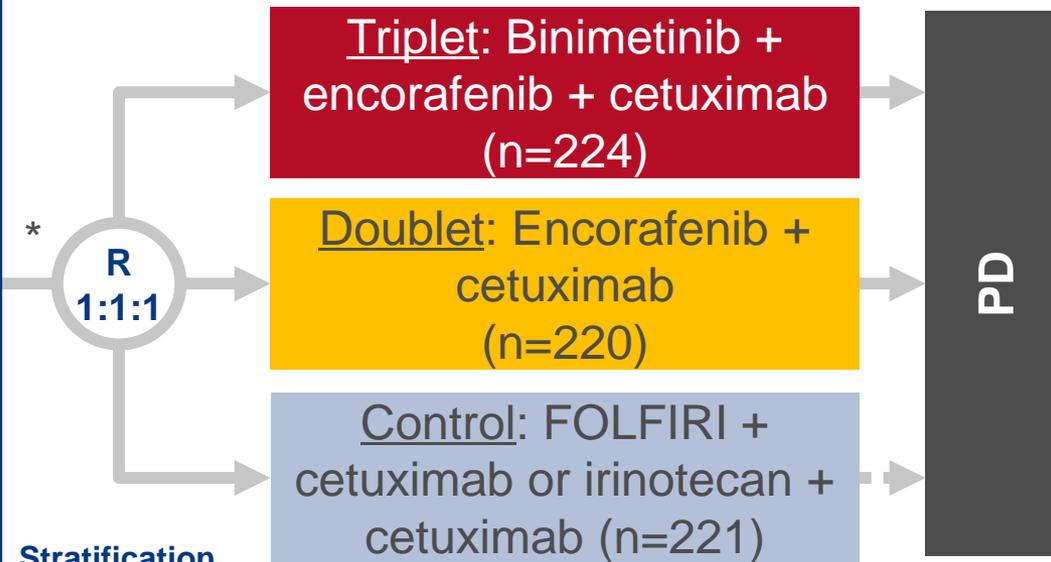
LBA32: Encorafenib plus cetuximab with or without binimetinib for BRAF V600E–mutant metastatic colorectal cancer: Expanded results from a randomized, 3-arm, phase III study vs. the choice of either irinotecan or FOLFIRI plus cetuximab (BEACON CRC) – Tabernero J, et al

Study objective

- To investigate the long-term efficacy and safety of encorafenib + cetuximab ± binimetinib in patients with BRAF V600E-mutant mCRC

Key patient inclusion criteria

- BRAF V600E mutant mCRC
 - Progressed after 1 or 2 previous regimens
 - No prior treatment with RAF, MEK, EGFR inhibitors or irinotecan
 - Eligible for cetuximab
 - ECOG PS 0–1
- (n=665)



- BRAF V600E mutation status, ECOG PS, no. of prior regimens (1/2)

PRIMARY ENDPOINT

- ORR

*Safety lead-in (n=30): binimetinib 45 mg bid; encorafenib 300 mg/day; cetuximab 400 mg/m² (initial) then 250 mg/m² qw

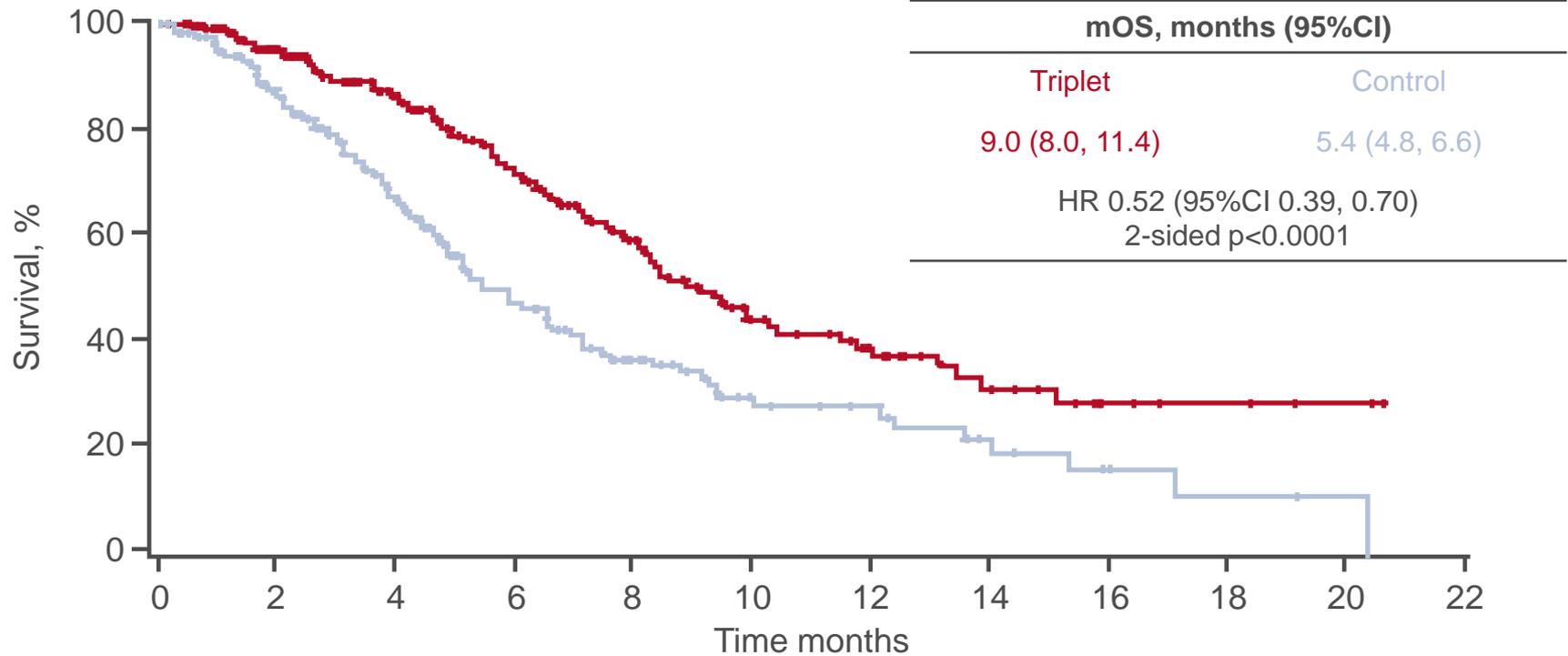
SECONDARY ENDPOINTS

- OS, PFS, safety

LBA32: Encorafenib plus cetuximab with or without binimetinib for BRAF V600E-mutant metastatic colorectal cancer: Expanded results from a randomized, 3-arm, phase III study vs. the choice of either irinotecan or FOLFIRI plus cetuximab (BEACON CRC) – Tabernero J, et al

Key results

OS for triplet vs. control



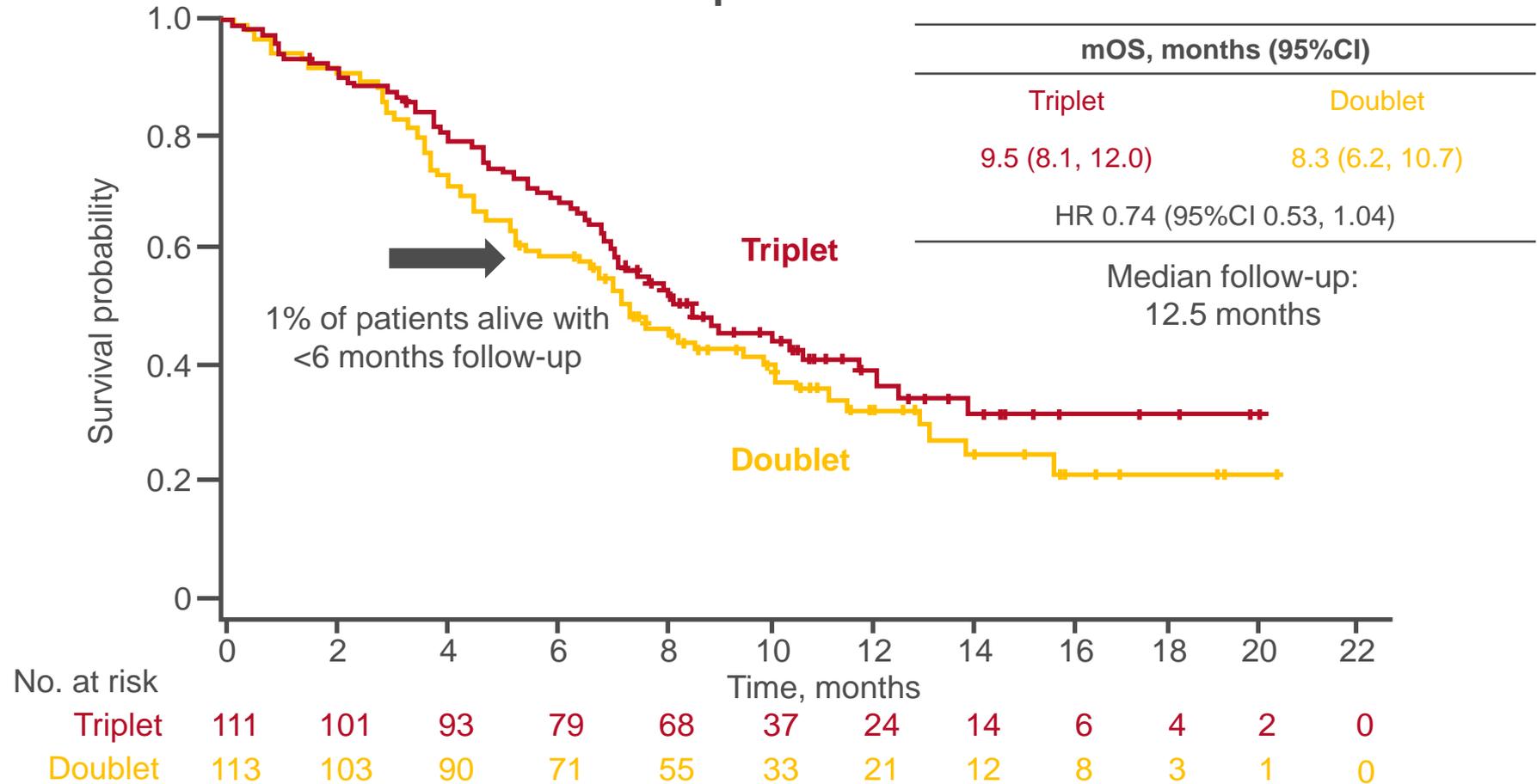
No. at risk

Triplet	224	186	141	103	69	37	24	14	6	4	2	0
Control	221	158	102	60	34	18	15	7	4	2	1	1

LBA32: Encorafenib plus cetuximab with or without binimetinib for BRAF V600E-mutant metastatic colorectal cancer: Expanded results from a randomized, 3-arm, phase III study vs. the choice of either irinotecan or FOLFIRI plus cetuximab (BEACON CRC) – Tabernero J, et al

Key results

OS for triplet vs. doublet



LBA32: Encorafenib plus cetuximab with or without binimetinib for BRAF V600E–mutant metastatic colorectal cancer: Expanded results from a randomized, 3-arm, phase III study vs. the choice of either irinotecan or FOLFIRI plus cetuximab (BEACON CRC) – Tabernero J, et al

Key results (cont.)

Response	Triplet (n=111)	Doublet (n=113)	Control (n=107)
ORR, % (95%CI)	26 (18, 35)	20 (13, 29)	2 (<1, 7)
p-value vs. control	<0.0001	<0.0001	
1 prior line of therapy, %	34	22	2
>1 prior line of therapy, %	14	16	2
BOR, %			
CR	4	5	0
PR	23	15	2
SD	42	54	29
PD	10	7	34
NE	22	19	36
Clinical progression or AE	14	17	16
Insufficient information to assess response	8	2	20

LBA32: Encorafenib plus cetuximab with or without binimetinib for BRAF V600E–mutant metastatic colorectal cancer: Expanded results from a randomized, 3-arm, phase III study vs. the choice of either irinotecan or FOLFIRI plus cetuximab (BEACON CRC) – Tabernero J, et al

Key results (cont.)

Grade ≥3 AEs occurring in ≥5%, %	Triplet (n=222)	Doublet (n=216)	Control (n=193)
Diarrhoea	10	2	10
Abdominal pain	6	2	5
Nausea	5	<1	1
Asthenia	3	3	5
Haemoglobin, hypo	11	4	4
Creatinine, hyper	5	2	1

Conclusion

- In patients with BRAF V600E-mutant mCRC, encorafenib + cetuximab + binimetinib demonstrated significant improvements in OS and ORR compared with standard of care and may provide more benefit over doublet although with some greater, but manageable, toxicity

LBA34: MIRACLE: Green tea extract versus placebo for the prevention of colorectal adenomas: a randomized, controlled trial – Seufferlein T, et al

Study objective

- To investigate the efficacy and safety of green tea extract for preventing colorectal adenomas

Key patient inclusion criteria

- Endoscopic polypectomy (adenoma) ≤ 6 months
 - Age 50–80 years
- (n=879)

Green tea extract*
4 weeks

R
1:1

Green tea extract*
3 years
(n=432)

Placebo
3 years
(n=447)

Follow-up
colonoscopy

Stratification

- Low-dose aspirin[†] (yes vs. no)
- Study centre

PRIMARY ENDPOINT

- Incidence of metachronous colorectal adenomas

SECONDARY ENDPOINTS

- Adenoma characteristics, frequency of severe dysplasia/carcinomas, safety

*Contains EGCG 150 mg bid; [†] ≤ 100 mg/day

LBA34: MIRACLE: Green tea extract versus placebo for the prevention of colorectal adenomas: a randomized, controlled trial – Seufferlein T, et al

Key results

No. with adenoma	Green tea extract, n/N (%)	Placebo, n/N (%)	Crude RR (one-sided 95%CI)	p-value	Adjusted RR (one-sided 95%CI)	p-value
mITT	158/309 (51.1)	180/323 (55.7)	0.918 (-1.037)	0.124	0.905 (-1.018)	0.081
Per protocol	129/267 (48.3)	151/278 (54.3)	0.890 (-1.021)	0.081	0.883 (-1.006)	0.058

Low-dose aspirin subgroup

No. with adenoma	Green tea extract, n/N (%)	Placebo, n/N (%)	Crude RR (two-sided 95%CI)	p-value
mITT	25/48 (52.1)	35/58 (60.3)	0.863 (0.613, 1.215)	0.393
Per protocol	20/42 (47.6)	28/47 (59.6)	0.799 (0.539, 1.187)	0.259

LBA34: MIRACLE: Green tea extract versus placebo for the prevention of colorectal adenomas: a randomized, controlled trial – Seufferlein T, et al

Key results (cont.)

AEs, n (%)	Run-in phase (n=960)	Green tea extract (n=411)	Placebo (n=426)
Any	175 (18.2)	244 (59.4)	227 (53.3)
Blood/lymphatic system disorders	1 (0.1)	1 (0.2)	0 (0)
Cardiac disorders	5 (0.5)	16 (3.9)	19 (4.5)
Eye disorders	3 (0.3)	6 (1.5)	6 (1.4)
Gastrointestinal disorders	96 (10.0)	94 (22.9)	95 (22.3)
Diarrhoea	18 (1.9)	26 (6.3)	30 (7.0)
Abdominal discomfort	9 (0.9)	16 (3.9)	8 (1.9)
Abdominal pain	8 (0.8)	11 (2.7)	12 (2.8)
Nausea	21 (2.2)	11 (2.7)	15 (3.5)
Abdominal distension	19 (2.0)	6 (1.5)	12 (2.8)
Constipation	14 (1.5)	5 (1.2)	11 (2.6)
Hepatobiliary disorders	1 (0.1)	4 (1.0)	5 (1.2)
Hepatitis	0 (0)	0 (0)	1 (0.2)
Hepatitis, alcoholic	0 (0)	0 (0)	1 (0.2)
Liver disorder	0 (0)	0 (0)	1 (0.2)
Immune system disorder	0 (0)	4 (1.0)	3 (0.7)
Infections/infestations	21 (2.2)	96 (23.4)	107 (25.1)
Nasopharyngitis	10 (1.0)	36 (8.8)	55 (12.9)
Bronchitis	3 (0.3)	7 (1.7)	15 (3.5)

LBA34: MIRACLE: Green tea extract versus placebo for the prevention of colorectal adenomas: a randomized, controlled trial – Seufferlein T, et al

Key results (cont.)

Grade 3–4 AEs, n	Run-in phase (n=960)	Green tea extract (n=411)	Placebo (n=426)
ALT	1	1	1
AST	1	0	1
Bilirubin	0	0	0

Conclusion

- Green tea extract demonstrated a trend towards preventing large bowel adenomas and was generally well-tolerated

522O: Mutation tracking in circulating tumor DNA (ctDNA) detects minimal residual disease (MRD) in patients with localized colorectal cancer (CRC) and identifies those at high risk of recurrence regardless of stage, lack of CDX2 expression and CMS subtype – Tarazona N, et al

Study objective

- To investigate a comprehensive molecular multi-omic approach using integrated genomics, transcriptomics and proteomics data as a prognostic model for patients with localised colon cancer

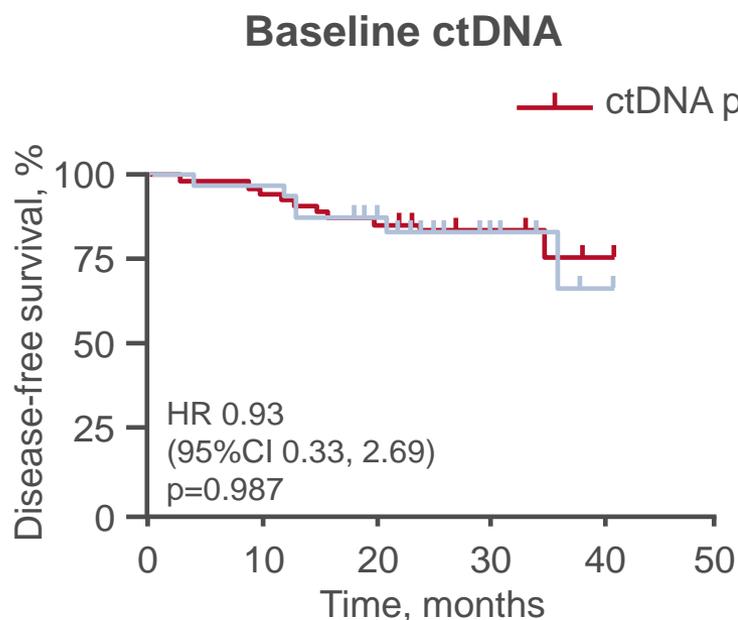
Methods

- Blood and tumour samples were taken from 150 patients with stage I–III colon cancer at time of surgery for NGS (FFPE tissue for a custom panel of 29 genes) and ctDNA and CEA analysis (blood) between October 2015 and October 2017; blood samples were also taken 6–8 weeks after surgery and then every 4 months for ctDNA and CEA analysis up to 5 years
- Patients could receive adjuvant chemotherapy at the clinician's discretion (55 of the 150 patients received chemotherapy)
- Analysis of cytokines, gene expression and CDX2 was performed on 132, 117 and 150 samples, respectively

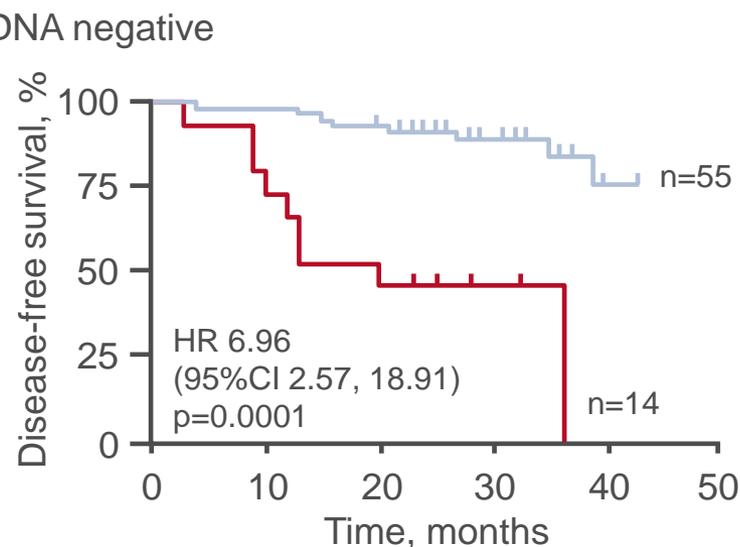
522O: Mutation tracking in circulating tumor DNA (ctDNA) detects minimal residual disease (MRD) in patients with localized colorectal cancer (CRC) and identifies those at high risk of recurrence regardless of stage, lack of CDX2 expression and CMS subtype – Tarazona N, et al

Key results

- Baseline ctDNA was not predictive while postoperative ctDNA was predictive for DFS



Postoperative (6–8 weeks) ctDNA

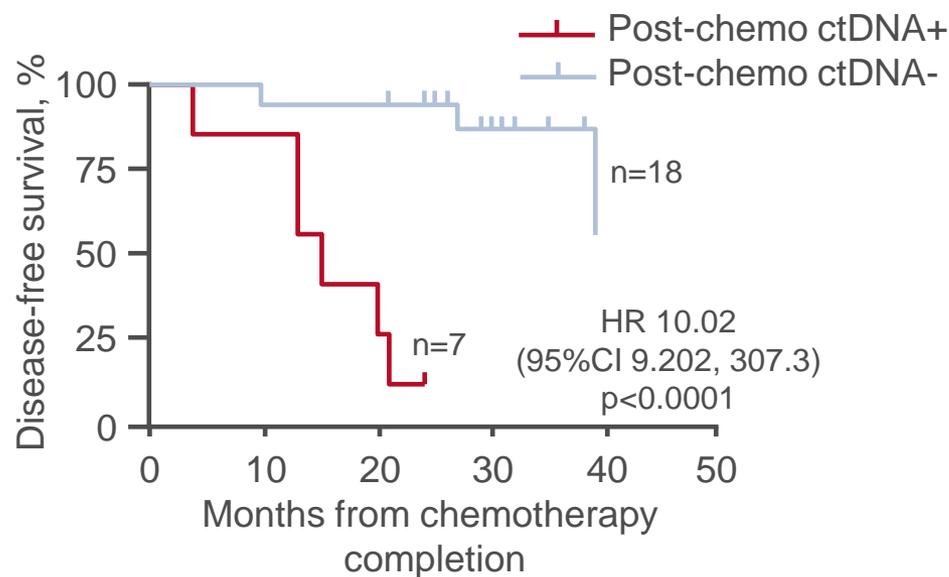


60 of 94 (63.8%) ctDNA detection in baseline plasma DNA

522O: Mutation tracking in circulating tumor DNA (ctDNA) detects minimal residual disease (MRD) in patients with localized colorectal cancer (CRC) and identifies those at high risk of recurrence regardless of stage, lack of CDX2 expression and CMS subtype – Tarazona N, et al

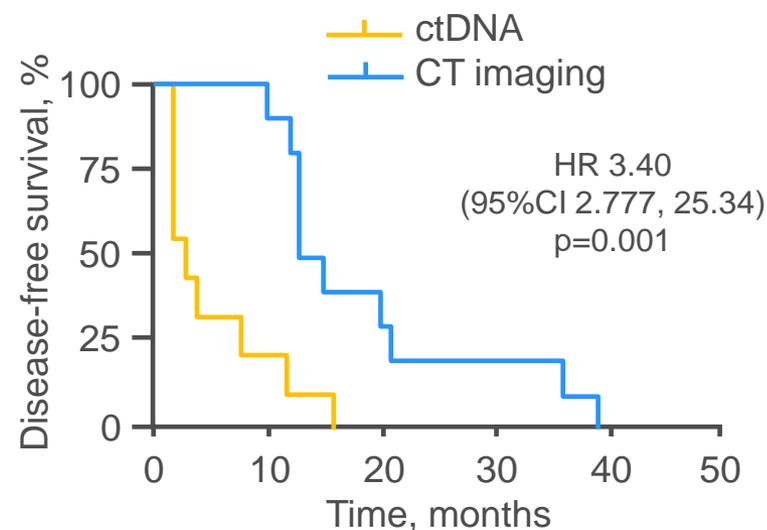
Key results (cont.)

Predicting early relapse post-chemotherapy



28% ctDNA detection in post-chemo plasma DNA. The recurrence rate among patients with positive post-chemo ctDNA was 85.7% (6 of 7 patients)

Plasma ctDNA for detecting recurrence



Median lead time over clinical relapse for all relapses was 11.5 months

522O: Mutation tracking in circulating tumor DNA (ctDNA) detects minimal residual disease (MRD) in patients with localized colorectal cancer (CRC) and identifies those at high risk of recurrence regardless of stage, lack of CDX2 expression and CMS subtype – Tarazona N, et al

Key results (cont.)

HR (95%CI); p-value	Univariate analysis (n=149, 18 events)	Multivariate analysis (n=61, 15 events)
Tumour site (right vs. left)	0.30 (0.11, 0.85); 0.023	
T stage (T1-T2-T3 vs. T4)	3.36 (1.27, 8.88); 0.015	
Stage (II vs. III)	3.24 (1.04, 10.09); 0.043	
Nodal involvement (N0 vs. N1 + N2)	4.65 (1.50, 14.45); 0.008	
Vascular invasion (yes vs. no)	0.14 (0.05, 0.38); <0.001	
Perineural invasion (yes vs. no)	0.38 (0.15, 0.98); 0.045	
Postoperative ctDNA status (- vs. +)	6.96 (2.57, 18.91); <0.001	13.64 (2.64, 70.49); 0.002
CDX2 (present vs. loss)	12.68 (4.63, 34.69); <0.001	23.12 (3.59, 149.05); 0.001
IL6 (≤3.45 vs. >3.45)	3.55 (1.16, 10.90); 0.027	
CMS (CMS1 vs. CMS2 + CMS3)	0.12 (0.03, 0.59); 0.009	

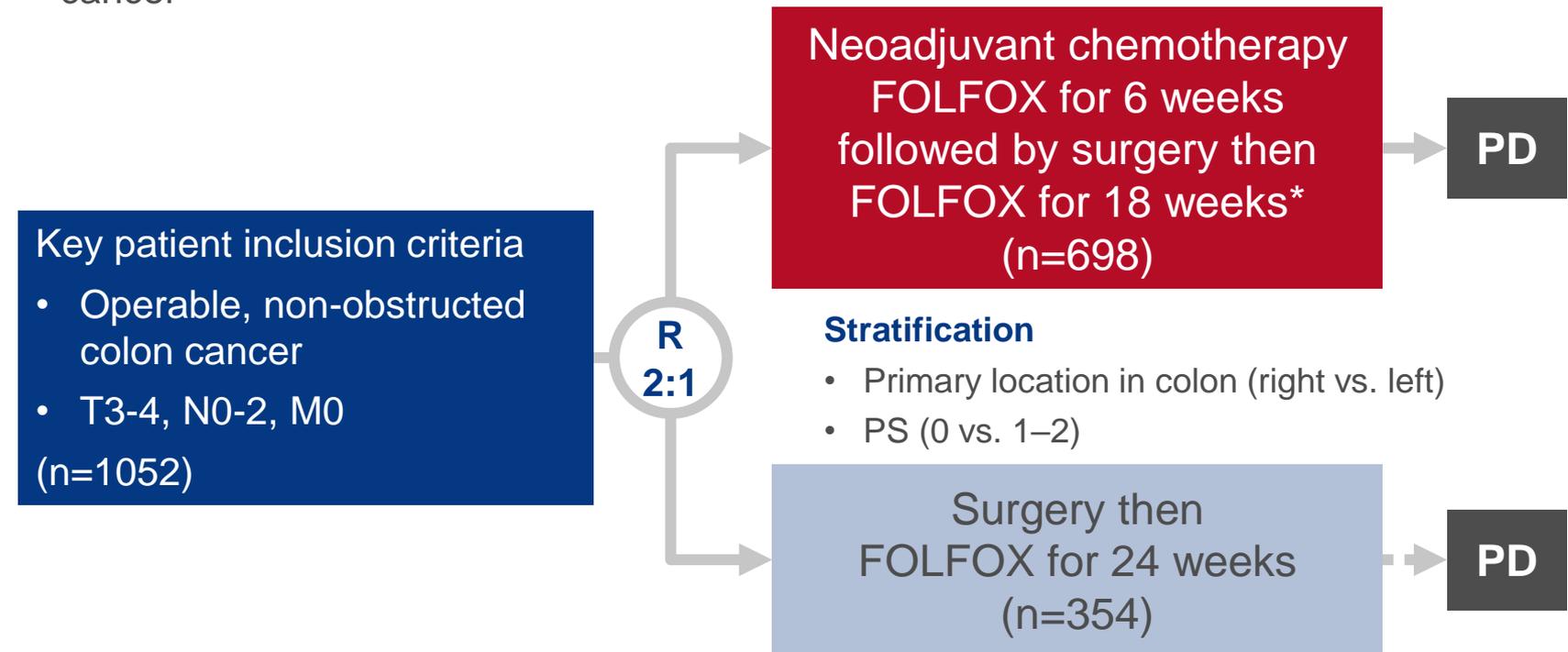
Conclusion

- In patients with stage I–III colon cancer, the only variables found to be predictive of a higher risk of recurrence were postoperative plasma ctDNA and lack of CDX2 expression which was independent of stage, inflammatory cytokines and CMS group

5230: FOxTROT: an international randomised controlled trial in 1053 patients evaluating neoadjuvant chemotherapy (NAC) for colon cancer – Morton D, et al

Study objective

- To investigate the efficacy and safety of neoadjuvant chemotherapy in patients with colon cancer



PRIMARY ENDPOINT

- 2-year DFS

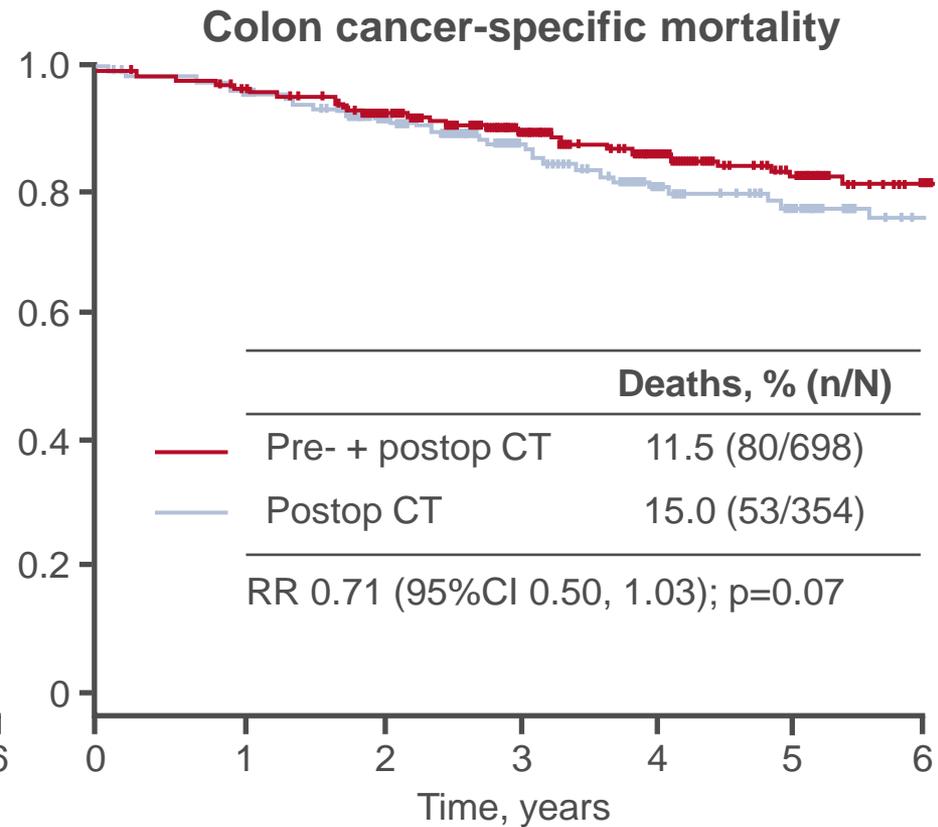
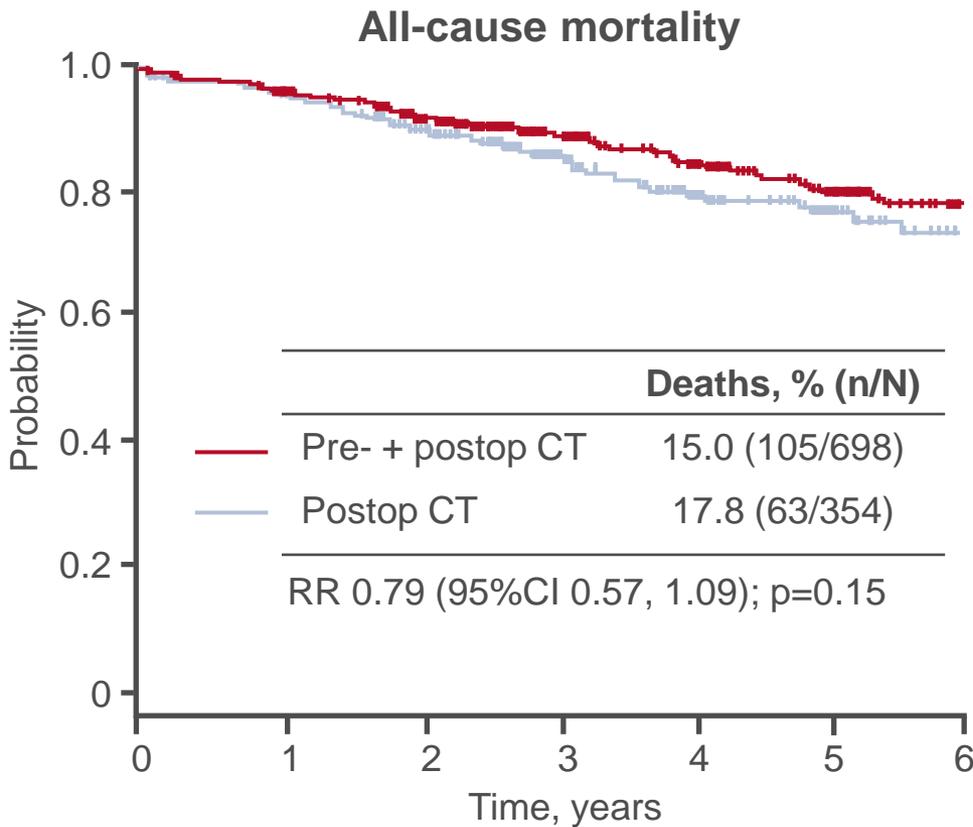
SECONDARY ENDPOINTS

- Resection rate, downstaging, survival, safety

*Optional substudy of 6 weeks of FOLFOX + panitumumab if KRAS wt

5230: FOxTROT: an international randomised controlled trial in 1053 patients evaluating neoadjuvant chemotherapy (NAC) for colon cancer – Morton D, et al

Key results (cont.)



523O: FOxTROT: an international randomised controlled trial in 1053 patients evaluating neoadjuvant chemotherapy (NAC) for colon cancer – Morton D, et al

Key results (cont.)

	Pre- and postoperative chemotherapy (n=684)	Postoperative chemotherapy (n=351)	p-value
Procedure involved a stoma	11.7	9.0	0.18
Wound infection	8.5	8.9	0.85
Bronchopneumonia	1.8	3.1	0.16
PE ± DVT	1.6	0.6	0.18
Anastomotic leak or intra-abdominal abscess	4.7	7.4	0.07
Complication requiring further surgery	4.3	7.1	0.05
Complication prolonging hospital stay	11.6	14.3	0.21
Death within 30 days	0.6	0.6	0.98

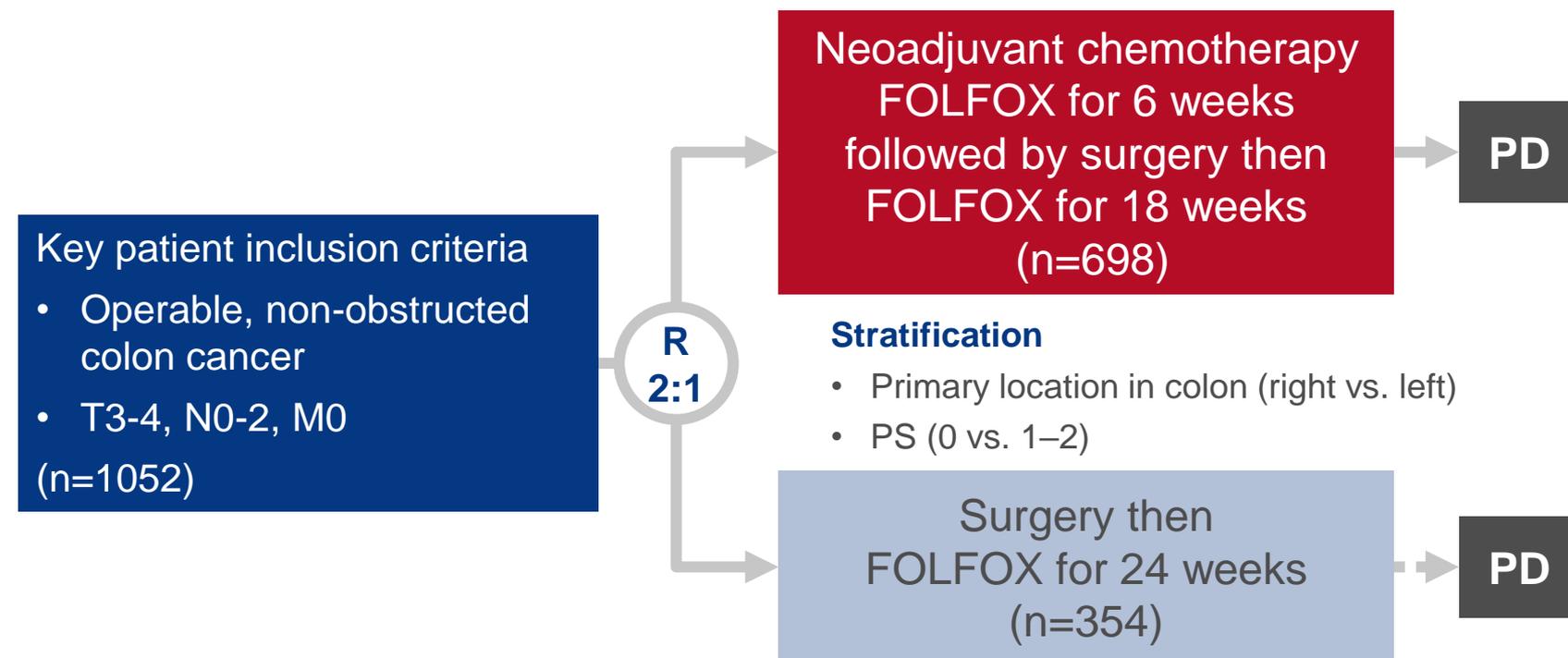
Conclusion

- In patients with colon cancer, the use of neoadjuvant chemotherapy did not significantly improve all-cause or colon cancer-specific mortality although the rate of major surgical complications was reduced

532PD: Pre-operative FOLFOX chemotherapy in advanced colon cancer: pathology analysis of the FOxTROT trial – West N, et al

Study objective

- To investigate the efficacy and safety of neoadjuvant chemotherapy in patients with colon cancer



ENDPOINTS

- RFS, staging, response

532PD: Pre-operative FOLFOX chemotherapy in advanced colon cancer: pathology analysis of the FOxTROT trial – West N, et al

Key results

		Preoperative chemotherapy	Straight to surgery	p-value
pT stage	0	17 (3.7)	0 (0)	0.0001
	1	9 (1.9)	1 (0.4)	
	2	59 (12.6)	17 (7.8)	
	≥3	382 (81.8)	201 (91.8)	
pN stage	0	296 (63.9)	114 (52.0)	0.0002
	1	115 (24.9)	58 (26.5)	
	2	52 (11.2)	47 (21.5)	
Apical node metastases	No	562 (96.7)	283 (91.9)	0.002
	Yes	19 (3.2)	25 (8.1)	
Extranodal spread	No	533 (91.6)	250 (81.2)	<0.0001
	Yes	49 (8.4)	58 (18.9)	
R status	0	459 (98.7)	210 (95.9)	0.02
	1	6 (1.3)	9 (4.1)	
Extramural venous invasion	No	382 (65.5)	172 (55.7)	0.004
	Yes	201 (34.5)	137 (44.3)	
Intramural venous invasion	No	468 (80.3)	208 (67.3)	<0.0001
	Yes	115 (19.7)	101 (32.7)	
Lymphatic invasion	No	314 (53.6)	139 (44.7)	0.002
	Yes	272 (46.4)	172 (55.3)	
Perineural invasion	No	516 (88.4)	267 (85.8)	0.69
	Yes	68 (11.6)	44 (14.2)	
Stromal lymphocytes	Mean (SD)	24 (14.0)	16.4 (8.7)	<0.0001
	Median (IQR)	20 (15–35)	15 (10–20)	
Tumour lymphocytes	Mean (SD)	4.3 (5.0)	4.1 (5.4)	0.63
	Median (IQR)	3 (1–6)	2 (1–5)	

532PD: Pre-operative FOLFOX chemotherapy in advanced colon cancer: pathology analysis of the FOxTROT trial – West N, et al

Key results (cont.)

		Preoperative chemotherapy	Straight to surgery	p-value
Budding grade	G1 (<5 per x20 field)	406 (71.2)	169 (54.4)	<0.0001
	G2 (5–10 per x20 field)	133 (23.3)	99 (31.8)	
	G3 (>10 per x20 field)	31 (5.5)	43 (13.8)	
Poorly differentiated clusters	G1 (<5 per x20 field)	384 (67.5)	190 (61.1)	0.10
	G2 (5–10 per x20 field)	100 (17.6)	67 (21.5)	
	G3 (>10 per x20 field)	85 (14.9)	54 (17.5)	
Neutrophils	≥60 per high power field	28 (4.8)	30 (9.7)	<0.0001
	30–60 per high power field	42 (7.2)	39 (12.5)	
	<30 per high power field	558 (88.0)	242 (77.8)	
Eosinophils	≥60 per high power field	35 (6.0)	9 (2.9)	<0.0001
	30–60 per high power field	145 (24.8)	37 (11.9)	
	<30 per high power field	404 (69.2)	265 (85.2)	
Abscess formation	Yes	66 (11.3)	65 (20.9)	0.0001
Tertiary lymphoid structures	Yes	472 (80.5)	261 (84.2)	0.18
Number of lymph nodes	Mean (SD)	23.2 (10.7)	25.7 (11.5)	0.002
	Median (IQR)	22 (16–29)	24 (18–32)	
Average tumour area in metastatic lymph nodes (mm ²)	Mean (SD)	4.6 (3.1)	5.9 (4.8)	0.003
	Median (IQR)	3.9 (2.5–6.4)	5.4 (3.9–7.1)	

532PD: Pre-operative FOLFOX chemotherapy in advanced colon cancer: pathology analysis of the FOxTROT trial – West N, et al

Conclusion

- In patients with advanced colon cancer, the use of preoperative chemotherapy demonstrated a significant impact on the primary tumour including reducing high-risk pathological characteristics as well as possible mechanisms of metastatic spread