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Version: Supplemental Material

## Article:

Mukherjee, S., Qi, C., Shaw, R. et al. (20 more authors) (2024) Standard or high dose chemoradiotherapy, with or without the protease inhibitor nelfinavir, in patients with locally advanced pancreatic cancer: The phase 1/randomised phase 2 SCALOP-2 trial. European Journal of Cancer, 209. 114236. ISSN 0959-8049

https://doi.org/10.1016/j.ejca.2024.114236

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Site	Address	Principal	
		investigator(s)	
Recruitment to stages 1 &2	!		
Addenbrooke's	Cambridge University Hospitals NHS	T Ajithkumar	
	Foundation Trust, Hills Road, Cambridge,		
	Cambridgeshire, CB2 0QQ		
Bristol Haematology &	University Hospitals Bristol & Weston NHS	S Falk	
Oncology Centre	Foundation Trust, Horfield Road Bristol,		
	BS28ED		
Castle Hill Cancer	Queen's Centre for Oncology &	R Roy	
Centre	Haematology, Hull University Teaching		
	Hospitals NHS Trust, Castle Road,		
	Cottingham, HU16 5JQ		
Churchill Hospital	Oxford University Hospitals NHS	S Mukherjee	
	Foundation Trust, Old Road, Headington,		
	Oxford, Oxfordshire, OX3 7LE		
Royal Free Hospital	Royal Free London NHS Foundation Trust,	R Gilmore	
	Pond Street, London, NW3 2QG		
Royal Surrey County	Royal Surrey NHS Foundation Trust,	S Cummins	
Hospital	Egerton Road, Guildford, Surrey, GU2 7XX		
Leeds Cancer Centre	St James's University Hospital, The Leeds	G Radhakrishna/R	
	Teaching Hospitals NHS Trust, Leeds, West	Goody	
	Yorkshire, LS9 7TF	,	
University Hospitals	University Hospitals Coventry &	M Scott-Brown	
Coventry &	Warwickshire NHS Trust, Clifford Bridge		
Warwickshire	Road, Coventry CV2 2DX		
Velindre Cancer Centre	Velindre University NHS Trust, Velindre	S Arif	
	Road, Whitchurch, Cardiff, CF14 2TL		
Recruitment to stage 2 only	V		
Aberdeen Royal	- T	A Chaukat I/ Cannally	
Infirmary	NHS Grampian, Foresterhill Road, Aberdeen, AB25 2ZN	A Shaukat, K Connolly	
<u> </u>	·	C Harrison	
Belfast City Hospital	Belfast Health & Social Care Trust, Lisburn	Charison	
Nottinghous City	Road, Belfast, BT12 6BA	I Amor	
Nottingham City	Nottingham University Hospitals NHS Trust,	L Aznar	
Hospital	Hucknall Road, Nottingham, NG5 1PB	D.C. day also	
Clatterbridge Cancer	The Clatterbridge Cancer Centre NHS	R Sripadam	
Centre	Foundation Trust, Clatterbridge Road,		
0.11	Bebington, Wirral, CH63 4JY		
Colchester Hospital	East Suffolk and North Essex NHS	SLoo	
	Foundation Trust, Turner Road, Colchester,		
	CO4 5JL		

Derriford Hospital	University Hospitals Plymouth NHS Trust,	D Sherriff
	Derriford Road, Crownhill, Plymouth,	
	Devon, PL6 8DH	
Hammersmith Hospital	Imperial College Healthcare NHS Trust, Du	H Wasan
	Cane Road, London, W12 0HS	
Milton Keynes	Milton Keynes University Hospital NHS	W Saka
University Hospital	Foundation Trust, Standing Way,	
	Eaglestone, Milton Keynes, MK6 5LD	
Norfolk & Norwich	Norfolk & Norwich University Hospitals	D Holyoake
University Hospital	NHS Foundation Trust, Colney Lane,	
	Norwich, NR4 7UY	
North Middlesex	North Middlesex University Hospital NHS	L Melcher
Hospital	Trust, Sterling Way, London, N18 1QX	
The Christie Hospital	The Christie NHS Foundation Trust,	G Radhakrishna
	Wilmslow Road, Manchester, M20 4BX	
University College	University College London Hospitals NHS	J Bridgewater
Hospital Macmillan	Foundation Trust, London, WC1E 6AG	
Cancer Centre		
Weston Park Cancer	Sheffield Teaching Hospitals NHS	J Wadsley
Centre	Foundation Trust, Witham Road, Sheffield,	
	S10 2SJ	
Lincoln Oncology	United Lincolnshire Hospitals NHS Trust,	Z Stokes
Centre	Lincoln, Lincolnshire, LN2 5QY	

Supplementary table 1: A list of centres that recruited to stages 1 and 2 of the SCALOP-2 trial. All centres are secondary or tertiary cancer centres that form part of the National Health Service in the United Kingdom. Principal Investigators based at each respective site are shown, as is whether they participated in stages 1 and 2 or only stage 2.

PRIOR TO RANDOMISATION TIMEPOINT	
Before starting induction treatment	9 (5.7%)
Treatment not started – reason not provided	5
Disease related adverse event	1
Investigator decision	1
Death	1
Identification of metastatic node outside of treatment field	1
After starting induction treatment but prior to the randomisation timepoint	24 (15.1%)
Toxicity	7
Disease progression	3
Investigator decision	3
Patient decision	3
Disease related adverse event	2
Death	2
Patient fitness	2
Tumour operable	1
Non-measurable disease	1
AT RANDOMISATION TIMEPOINT	
Ineligible for randomisation	19 (11.9%)
Progressive disease according to RECIST criteria	9
Tumour not encompassable by a radically treatable radiotherapy volume	5
WHO performance status >1	5
Loss of weight greater than 10% of baseline	5
Inadequate liver function test result	2
Inadequate renal function result	1

## Supplementary table 2: A summary of reasons for withdrawal from stage 2 prior to randomisation.

Each reason for withdrawal is listed below the relevant timepoint at which withdrawal from the study occurred.

			Dose Group <sup>1</sup>		Total
Age at registration (years) (n=11, 7, 9)		1000 mg (n=11)	1250 mg (n=7)	Not Assigned (n=9)	(n=27) <sup>1</sup>
Age at registration (years) (n=11, 7, 9)		71.9 (50.2, 77.0)	67.3 (55.3, 74.7)	67.4 (49.3, 82.4)	69.2 (49.3, 82.4)
Time from pancreatic cancer diagnosis t (months) (n=11, 7, 9)	to registration	0.8 (0.2, 2.1)	1.2 (0.5, 2.3)	1.8 (1.1, 3.4)	1.2 (0.2, 3.4)
Gender	Male	27% (3)	43% (3)	22% (2)	30% (8)
dender	Female	73% (8)	57% (4)	78% (7)	70% (19)
	Histologically	55% (6)	29% (2)	44% (4)	44% (12)
Method of diagnosis of pancreatic cancer	Cytologically	27% (3)	71% (5)	56% (5)	48% (13)
	Both	18% (2)	0	0	7% (2)
Site of tumour within the nancross	Head	64% (7)	86% (6)	89% (8)	78% (21)
Site of tumour within the pancreas  Body or tail		36% (4)	14% (1)	11% (1)	22% (6)
WIIO orfo	0	45% (5)	43% (3)	67% (6)	52% (14)
WHO performance status		55% (6)	57% (4)	33% (3)	48% (13)
Any significant past/current medical	Yes	91% (10)	100% (7)	100% (9)	96% (26)
conditions or surgical procedures (non-pancreatic cancer)?	No	9% (1)	0	0	4% (1)
	Yes	0	0	0	0
Any kidney disease?	No	100% (11)	100% (7)	100% (9)	100% (27)
Any previous palliative bypass	Yes	27% (3)	29% (2)	44% (4)	33% (9)
procedure or CBD stent?	No	73% (8)	71% (5)	56% (5)	67% (18)
Any previous non-pancreatic cancer	Yes	0	0	0	0
radiotherapy to upper abdomen?	No	100% (11)	100% (7)	100% (9)	100% (27)
Height (cm) (n=11, 7, 9)		162.5 (150.0, 182.5)	169.0 (157.3, 173.0)	167.9 (154.0, 185.0)	166.0 (150.0, 185.0)
Weight (kg) (n=11, 7, 9)		76.3 (53.0, 89.9)	64.6 (49.7, 76.7)	70.0 (45.6, 110.6)	70.0 (45.6, 110.6)
Body surface area (m²) (n=11, 7, 9)		1.8 (1.6, 2.1)	1.7 (1.5, 1.9)	1.8 (1.5, 2.1)	1.8 (1.5, 2.1)
Systolic blood pressure (mmHg) (n=9, 7,	, 8)	137.0 (116.0, 166.0)	143.0 (113.0, 177.0)	132.5 (106.0, 175.0)	138.5 (106.0, 177.0)
Diastolic blood pressure (mmHg) (n=9, 7	7, 8)	80.0 (63.0, 89.0)	79.0 (63.0, 91.0)	80.0 (70.0, 92.0)	79.5 (63.0, 92.0)
Pulse (beats/min) (n=9, 7, 8)		80.0 (69.0, 102.0)	86.0 (77.0, 98.0)	82.0 (75.0, 94.0)	84.5 (69.0, 102.0)
Temperature (°C) (n=9, 7, 8)		36.5 (36.1, 37.2)	36.7 (36.2, 37.0)	36.5 (35.9, 37.0)	36.6 (35.9, 37.2)
	T0/TX T1	0	0 0	0 11% (1)	0 4% (1)
T Stage	T2	18% (2)	0	11% (1)	11% (3)
	T3	18% (2)	29% (2)	11% (1)	19% (5)
	T4 N0/NX	64% (7) 55% (6)	71% (5) 57% (4)	67% (6) 56% (5)	67% (18) 56% (15)
N Stage	N1	45% (5)	43% (3)	44% (4)	44% (12)
	N2 N4	0	0 0	0 0	0
M Stage	M0	100% (11)	100% (7)	100% (9)	100% (27)
M Stage	M1	0 ′	0 ,	0 ,	0 ′

Supplementary table 3: Baseline patient and tumour characteristics for patients enrolled in stage 1 of the SCALOP-2 trial. <sup>1</sup>% (n) for categorical variables (percentage calculated using the total number in the respective group); median (min-max) for continuous variables

	Arm A (n= 19)	Arm B (n= 26)	Arm C (n= 19)	Arm D (n= 27)	A-D combined (n= 91)	Arm E (n= 15)	Observation cohort + early withdrawals (n= 53)	All registered (n= 159)
Longest diameter of primary lesion (mm)	0	1	0	0	1	0	1	2
CA19-9 concentration at C1D1 (U/mL)	1	2	0	3	6	1	10	17
Number of days from registration to start of induction chemotherapy	0	0	0	0	0	0	9	9
Longest diameter of primary lesion at randomisation (cm)	3	7	1	2	13	1		
CA19-9 concentration at C3D1 (U/mL)	3	5	1	5	14	0	·	·

**Supplementary table 4: A summary of missing data items for each of the stage 2 trial arms.** Of the fourteen patients for whom there was missing data for largest diameter of primary lesion, four did not have a recorded measurement available and for the remainder the diameter was not measurable.

	Arm A (n=19)	Arm B (n=26)	Arm C (n=19)	Arm D (n=27)	Arm E (n=15)	Obs cohort (n=53)	Total (n=159)
Patients with data n (%)	11 (57.9)	14 (53.8)	11 (57.9)	11 (40.7)	10 (66.7)	22 (41.5)	79 (49.7)
Received subsequent treatment n (% out of patients with data)	9 (81.8)	10 (71.4)	7 (63.6)	9 (81.8)	10 (100)	20 (90.9)	65 (82.3)
Median time to first subsequent treatment for those who received treatment in months (LQ, UQ) <sup>1</sup>	3.4 (3.1, 5.0)	3.8 (3.3, 6.0)	5.1 (4.2, 7.5)	4.3 (3.6, 6.4)	4.1 (1.8, 8.3)	1.3 (0.7, 2.3)	3.6 (1.6, 5.3)

**Supplementary table 5: A summary of subsequent treatment by stage 2 study arm.** <sup>1</sup>The median time is out of patients who received subsequent treatment (second row), it is descriptive i.e. not Kaplan-Meier

AE Category	1000mg Do (n=:		1250mg Dose Group (n=7)	
n (%)	Grade	Grade	Grade	Grade
	1-4	3-4	1-4	3-4
Blood & Lymphatic System Disorders	2 (18%)		3 (43%)	1 (14%)
Cardiac Disorders	1 (9%)	1 (9%)		
Ear and labyrinth disorders	1 (9%)			
Eye disorders	1 (9%)			
Gastrointestinal Disorders	9 (82%)	1 (9%)	5 (71%)	
General Disorders & Administration Site Conditions	7 (64%)	2 (18%)	1 (14%)	
Infections & Infestations	4 (36%)	2 (18%)	1 (14%)	1 (14%)
Injury; poisoning and procedural complications	2 (18%)		1 (14%)	
Investigations	4 (36%)	3 (27%)	3 (43%)	1 (14%)
Metabolism & Nutrition Disorders	4 (36%)	1 (9%)	2 (29%)	
Musculoskeletal & Connective Tissue Disorders	3 (27%)	1 (9%)		
Nervous System Disorders	2 (18%)			
Psychiatric disorders	3 (27%)		1 (14%)	_
Reproductive system and breast disorders	2 (18%)			
Respiratory, thoracic and mediastinal disorders	2 (18%)		1 (14%)	
Skin and subcutaneous tissue disorders	3 (27%)	_	1 (14%)	_
Vascular disorders	1 (9%)			

Supplementary table 6: A summary of adverse events reported during stage 1 of the trial, by nelfinavir dose. Percentages are shown as a proportion of the total number of patients in each dose group.

	50.4 Gy in 28#	60 Gy in 30#	Total (n= 91)
	(n= 45)	(n= 46)	
Before CRT			
Total no. of patients with grade 1-5 AEs	45 (100)	46 (100)	91 (100)
Patients with grade 3-4 AEs	27 (60)	35 (76.1)	62 (68.1)
Grade 3-4 SAEs	13 (28.9)	24 (52.2)	37 (40.7)
Grade 3-4 SARs/SUSARs	8 (17.8)	16 (34.8)	24 (26.4)
After the start of CRT	(40 started CRT)	(39 started CRT)	(79 started CRT)
Total no. of patients with grade 1-5 AEs	36 (80)	31 (67.4)	67 (73.6)
Patients with grade 3-4 AEs	10 (22.2)	8 (17.4)	18 (19.8)
Grade 3-4 SAEs	8 (17.8)	6 (13)	14 (15.4)
Grade 3-4 SARs/SUSARs	5 (11.1)	4 (8.7)	9 (9.9)
Chi-squared p-value*		0.56	

Supplementary table 7: A summary of the overall, and grade 3/4, adverse event, serious adverse event (SAE), serious adverse reaction (SAR) and suspected unexpected serious adverse reaction (SUSAR) rate prior to and following the start of chemoradiotherapy, by radiation dose. Adverse event rate includes SAEs, SARs and SUSARs which are then listed separately below. \*Tests the null hypothesis that there is no difference in the number of post-CRT grade 3-4 adverse events between arms.

		CRT without nelfinavir (n= 38)	CRT with nelfinavir (n= 38)	Total (n= 76)
В	efore CRT			
	otal no. of patients ith grade 1-5 AEs	38 (100)	38 (100)	76 (100)
	atients with grade 3- AEs	25 (65.8)	30 (78.9)	55 (72.4)
	Grade 3-4 SAEs	15 (39.5)	19 (50)	34 (44.7)
	Grade 3-4 SARs/SUSARs	10 (26.3)	13 (34.2)	23 (30.3)
Α	fter the start of CRT	(35 started CRT)	(32 started CRT)	(67 started CRT)
	otal no. of patients ith grade 1-5 AEs	29 (76.3)	27 (71.1)	56 (73.7)
	atients with grade 3- AEs	8 (21.1)	9 (23.7)	17 (22.4)
	Grade 3-4 SAEs	6 (15.8)	8 (21.1)	14 (18.4)
	Grade 3-4 SARs/SUSARs	4 (10.5)	5 (13.2)	9 (11.8)
С	hi-squared p-value*	0.7	8	

Supplementary table 8: A summary of the overall, and grade 3/4, adverse event, serious adverse event (SAE), serious adverse reaction (SAR) and suspected unexpected serious adverse reaction (SUSAR) rate prior to and following the start of chemoradiotherapy, with and without nelfinavir.

Adverse event rate includes SAEs, SARs and SUSARs which are then listed separately below. \*Tests the null hypothesis that there is no difference in the number of post-CRT grade 3-4 adverse events between arms.

	Arms A (50.4 Gy in 28# with nelfinavir) (n= 19)	Arms C (60 Gy in 30# with nelfinavir) (n= 19)	Total (n= 38)
Before CRT			
Total no. of patients with grade 1-5 AEs	3 (15.8)	3 (15.8)	6 (15.8)
Patients with grade 3-4 AEs	0 (0)	0 (0)	0 (0)
Grade 3-4 SAEs	0 (0)	0 (0)	0 (0)
After the start of CRT	(16 started CRT)	(16 started CRT)	(32 started CRT)
Total no. of patients with grade 1-5 AEs	8 (42.1)	9 (47.4)	17 (44.7)
Patients with grade 3-4 AEs	1 (5.3)	3 (15.8)	4 (10.5)
Grade 3-4 SAEs	0 (0)	1 (5.3)	1 (2.6)

Supplementary table 9: Rate of adverse events & serious adverse events (SAEs) attributed to nelfinavir. Adverse event count includes SAEs, which are then listed separately below.

		50.4 Gy (n=		60 Gy i (n=		Tota (n = 9	
	Grade:	1-5	3-4	1-5	3-4	1-5	3-4
На	aematological						
	Anaemia	1 (2.2)	0 (0)	1 (2.2)	1 (2.2)	2 (2.2)	1 (1.1)
	Neutropenia	0 (0)	0 (0)	2 (4.3)	2 (4.3)	2 (2.2)	2 (2.2)
	Febrile neutropenia	0 (0)	0 (0)	1 (2.2)	1 (2.2)	1 (1.1)	1 (1.1)
G	astrointestinal						
	Diarrhoea	2 (4.4)	0 (0)	5 (10.9)	3 (6.5)	7 (7.7)	3 (3.3)
	Vomiting	2 (4.4)	1 (2.2)	1 (2.2)	1 (2.2)	3 (3.3)	2 (2.2)
	Colitis	0 (0)	0 (0)	1 (2.2)	1 (2.2)	1 (1.1)	1 (1.1)
	Duodenal obstruction	0 (0)	0 (0)	1 (2.2)	1 (2.2)	1 (1.1)	1 (1.1)
	Nausea	0 (0)	0 (0)	1 (2.2)	0 (0)	1 (1.1)	0 (0)
	Dysphagia	0 (0)	0 (0)	1 (2.2)	1 (2.2)	1 (1.1)	1 (1.1)
G	eneral						
	Pyrexia	7 (15.6)	0 (0)	9 (19.6)	3 (6.5)	16 (17.6)	3 (3.3)
	Malaise	0 (0)	0 (0)	1 (2.2)	1 (2.2)	1 (1.1)	1 (1.1)
	Device occlusion	1 (2.2)	1 (2.2)	0 (0)	0 (0)	1 (1.1)	1 (1.1)
	Peripheral oedema	0 (0)	0 (0)	1 (2.2)	1 (2.2)	1 (1.1)	1 (1.1)
Н	epatobiliary						
	Cholecystitis	1 (2.2)	1 (2.2)	1 (2.2)	1 (2.2)	2 (2.2)	2 (2.2)
	Jaundice cholestatic	0 (0)	0 (0)	1 (2.2)	1 (2.2)	1 (1.1)	1 (1.1)
In	fections	, ,	• •	, ,	,	•	, ,
	Biliary sepsis	1 (2.2)	1 (2.2)	3 (6.5)	3 (6.5)	4 (4.4)	4 (4.4)
	Sepsis	1 (2.2)	1 (2.2)	2 (4.3)	1 (2.2)	3 (3.3)	2 (2.2)
	Cellulitis	0 (0)	0 (0)	3 (6.5)	3 (6.5)	3 (3.3)	3 (3.3)
	Neutropenic sepsis	2 (4.4)	2 (4.4)	1 (2.2)	1 (2.2)	3 (3.3)	3 (3.3)
	Lower respiratory	1 (2.2)	1 (2.2)	1 (2.2)	1 (2.2)	2 (2.2)	2 (2.2)
	tract infection						
	Infection	0 (0)	0 (0)	1 (2.2)	1 (2.2)	1 (1.1)	1 (1.1)
	Device related	0 (0)	0 (0)	1 (2.2)	1 (2.2)	1 (1.1)	1 (1.1)
	infection						
	Pneumonia	1 (2.2)	1 (2.2)	0 (0)	0 (0)	1 (1.1)	1 (1.1)
	Urinary tract infection	0 (0)	0 (0)	1 (2.2)	1 (2.2)	1 (1.1)	1 (1.1)
	Liver abscess	0 (0)	0 (0)	1 (2.2)	1 (2.2)	1 (1.1)	1 (1.1)
	Gastroenteritis viral	1 (2.2)	0 (0)	0 (0)	0 (0)	1 (1.1)	0 (0)
	Pleural infection	1 (2.2)	0 (0)	0 (0)	0 (0)	1 (1.1)	0 (0)
	Biliary tract infection	1 (2.2)	1 (2.2)	0 (0)	0 (0)	1 (1.1)	1 (1.1)
	Stoma site infection	1 (2.2)	1 (2.2)	0 (0)	0 (0)	1 (1.1)	1 (1.1)
	Upper respiratory	1 (2.2)	1 (2.2)	0 (0)	0 (0)	1 (1.1)	1 (1.1)
	tract infection						
	Lung infection	0 (0)	0 (0)	1 (2.2)	1 (2.2)	1 (1.1)	1 (1.1)
Re	espiratory						
	Pulmonary embolism	2 (4.4)	2 (4.4)	0 (0)	0 (0)	2 (2.2)	2 (2.2)
	Chronic obstructive	1 (2.2)	1 (2.2)	0 (0)	0 (0)	1 (1.1)	1 (1.1)
	pulmonary disease						

Supplementary table 10: A summary of adverse events reported prior to the first fraction of chemoradiotherapy, subdivided by trial arms and grade of severity.

Randomised comparison  (n= no. randomised) (n=no. randomised before arm A and C closure)	60.0Gy RT in 30# Arms C+D (n=46) (n=38)	50.4Gy RT in 28# Arms A+B (n=45) (n=38)	CRT +nelfinavir Arms A+C (n=38) (n=38)	CRT -nelfinavir Arms B+D (n=53) (n=38)	
	Overall survival		Progression-free survival		
Numbers included	34	35	23	34	
No. events n (%)	24 (70.6)	22 (62.9)	21 (91.3)	28 (82.3)	
Median survival (60% CI)	17.5 (16.4, 20.7)	20.8 (15.7, 26.8)	10.3 (10.0, 11.6)	11.8 (10.6, 15.7)	
Adjusted HR (60% CI), one-sided p- value	1.31 (1.02, 1.70), p	=0.81	1.63 (1.26, 2.11), p=	=0.95	

Supplementary table 11: Per-protocol analyses for overall survival by radiation dose and progression free survival by nelfinavir usage.

Randomised comparison  (n= no. randomised) (n=no. randomised before arm A and C closure)	60.0Gy RT in 30# Arms C+D (n=46) (n=38)	50.4Gy RT in 28# Arms A+B (n=45) (n=38)	CRT +nelfinavir Arms A+C (n=38) (n=38)	CRT -nelfinavir Arms B+D (n=53) (n=38)	
	Overall survival		Progression-free su	irvival	
Sensitivity analysis 1: t interaction	est for RT dose and r	nelfinavir			
Interaction term (80% CI), two-sided p-value	1.57 (0.80, 3.09), p=	=0.39	0.82 (0.42, 1.62), p=	=0.71	
Sensitivity analysis 2: r	nulti-arm compariso	n			
Numbers included	Arm C: 19 Arm D: 19	Arm A: 19 Arm B: 19	Arm A: 19 Arm C: 19	Arm B: 19 Arm D: 19	
No. events n (%)	Arm C: 16 (84.2) Arm A: 14 (73.7) Arm D: 14 (73.7) Arm B: 14 (73.7)		Arm A: 16 (84.2) Arm C: 19 (100)	Arm B: 15 (78.9) Arm D: 17 (89.5)	
Adjusted HR (60% CI)	D vs B 0.87 (0.62, 1.21)		A vs B 1.91 (1.37, 2.66)		

Supplementary table 12: Sensitivity analyses for overall survival by radiation dose and progression free survival by nelfinavir usage.

Events* within 12 months of registration n (%)	60 Gy in 30# Arms C+D (n= 46)	50.4 Gy in 28# Arms A+B (n= 45)	CRT without nelfinavir Arms B+D (n= 38)	CRT with nelfinavir Arms A+C (n= 38)
Local progression (with or without metastasis)	11 (23.9)	15 (33.3)	11 (28.9)	12 (31.6)
Metastasis (no local progression)	16 (34.8)	11 (24.4)	9 (23.7)	15 (39.5)
Deaths	12 (26.1)	11 (24.4)	7 (18.4)	12 (31.6)
Deaths after local progression (with or without metastasis)	3 (6.5)	7 (15.6)	2 (5.3)	5 (13.2)
Deaths after metastasis (no local progression)	9 (19.6)	4 (8.9)	5 (13.2)	7 (18.4)
Deaths before any known progression	0	0	0	0
No local progression and alive	26 (56.5)	26 (57.8)	22 (57.9)	19 (50)
followed up for <12 months (with metastasis)	1 (2.2)	0	1 (2.6)	0
followed up for <12 months (no known progression)	1 (2.2)	1 (2.2)	0	0
followed up for >12 months (with metastasis)	6 (13.0)	7 (15.6)	3 (7.9)	8 (21.1)
followed up for >12 months (no known progression)	18 (39.1)	18 (40)	18 (47.4)	11 (28.9)

**Supplementary table 13: Data relating to local control at one year, by study arm.** \*Events refer to the first recorded event. Events where both local and distant progression were present at first diagnosis of progression are recorded as local progression (with or without metastasis).

	Arms E (n=15)
No. deaths n (%)	12 (80.0)
Median overall survival (60% CI)	21.3 (20.2, 23.4)
No. PFS events n (%)	15 (100)
Median progression free survival (60% CI)	12.4 (6.0, 14.4)
No. deaths within one year	3 (20)
One-year overall survival rate months 60% CI	80.0% (69.6, 87.2)
No. of patients with AEs n (%)	15 (100)
Patients with grade 3-4 AEs n (%)	13 (86.7)
No. of patients with SAEs n (%)	8 (53.3)
Patients with grade 3-4 SAEs n (%)	4 (26.7)
Patients undergoing resection	Yes: 2 (13.3)
post-randomisation n (%)	No: 13 (86.7)
	(Those with no data assumed no
	resection, 8 patients did not have any data)
No. of local progressions (with or	15 (100)
without metastasis) n (%)	
Disease response at <b>4</b> weeks post-treatment (complete	Complete response: 0
response/partial response/stable	Partial response: 2
disease/progressive disease)	Stable disease: 7
	Progressive disease: 1
	Not evaluable: 2
	No scan data: 3

Supplementary table 14: Survival and disease control outcomes for stage 2 trial arm E.

	Observation cohort (n=53)
No. deaths n (%)	46 (86.8)
Median overall survival (60% CI)	9.3 (8.4, 9.6)
No. of PFS events n (%)	48 (90.6)
Median progression free survival (60% CI)	3.6 (2.8, 5.6)
No. deaths in one year	35 (66.0)
One-year overall survival rate months n (%)	30.1% (24.7, 35.6)

Supplementary table 15: Survival and disease control outcomes for the observation cohort.

	Questionnaires Questionnaires received n (% of patients alive) expected n						
		QLQ C-30		PAN26		EQ-5D	
		Data available	Completed	Data available	Completed	Data available	Completed
Start of CRT	80	80 (100)	74 (92.5)	80 (100)	74 (92.5)	80 (100)	71 (88.8)
End of CRT	80	75 (93.8)	51 (63.8)	76 (95)	51 (63.8)	76 (95)	49 (61.3)
6 weeks post-CRT	80	75 (93.8)	55 (68.8)	75 (93.8)	56 (70)	75 (93.8)	55 (68.8)
18 weeks post-CRT	73	55 (75.3)	34 (46.6)	55 (75.3)	34 (46.6)	55 (75.3)	32 (43.8)
28 weeks post-CRT	61*	46 (75.4)	26 (42.6)	45 (73.8)	25 (41)	46 (75.4)	25 (41.0)

Supplementary table 16: Data availability for each of the three assessed health-related quality measures at each of the five assessed timepoints. \*Sixty patients were alive to 28 calendar weeks after CRT but one additional patient took the questionnaire early, prior to death, and has been included.

Global Health status	50.4 Gy in 28# (n= 45)			60 Gy in 30# (n= 46)		l (n=91)	Adjusted* mean difference between arms (95% CI)
	n	Median [LQ, UQ]	n	Median [LQ, UQ]	n	Median [LQ, UQ]	
Start of CRT	35	66.7 [33.3, 75]	38	66.7 [58.3, 83.3]	73	66.7 [50, 83.3]	-
End of CRT	28	66.7 [50, 83.3]	21	75 [58.3, 83.3]	49	66.7 [50, 83.3]	3.04 (-7.6, 13.67)
6 weeks post-CRT	25	75 [58.3, 83.3]	29	75 [58.3, 83.3]	54	75 [58.3, 83.3]	-4.98 (-14.87, 4.9)
18 weeks post-CRT	12	66.7 [54.2, 79.2]	21	66.7 [58.3, 75]	33	66.7 [58.3, 75]	-3.34 (-16.79, 10.1)
28 weeks post-CRT	11	66.7 [50, 83.3]	13	75 [50, 83.3]	24	70.8 [50, 83.3]	-0.18 (-15.08, 14.72)

**Supplementary table 17: EORTC QLQ-C30 score by chemoradiotherapy dose.** \*Model adjusting for time point (end of CRT/6/18/28 weeks post-CRT), GHS score at the start of CRT, RT treatment group (arms A+B vs C+D), nelfinavir assignment (arms A+C or B+D), WHO PS (0 or 1), disease location (head or body/tail) and RT treatment group\*timepoint interaction. Model included a random intercept for patient effect.

EQ5D index score	50.4 Gy (n= 45)	50.4 Gy in 28# (n= 45)		60 Gy in 30# (n= 46)		n=91)	Adjusted* mean difference between arms (95% CI)
	n	Median [LQ, UQ]	n	Median [LQ, UQ]	n	Median [LQ, UQ]	
Start of CRT	35	.8 [.71, .88]	36	.81 [.73, .86]	71	.81 [.71, .88]	-
End of CRT	25	.75 [.66, .91]	23	.84 [.72, .88]	48	.8 [.68, .89]	.04 (11, .18)
6 weeks post-CRT	25	.75 [.66, .88]	29	.8 [.72, .91]	54	.79 [.72, .91]	.03 (11, .17)
18 weeks post-CRT	14	.75 [.63, .85]	25	.71 [.1, .75]	39	.71 [.58, .8]	15 (32, .02)
28 weeks post-CRT	20	.46 [0, .72]	23	.62 [0, .84]	43	.52 [0, .8]	08 (24, .08)

**Supplementary table 18: EQ-5D-5L score by chemoradiotherapy (CRT) dose.** \*Model adjusting for time point (end of CRT/6/18/28 weeks post-CRT), GHS score at the start of CRT, RT treatment group (arms A+B vs C+D), nelfinavir assignment (arms A+C or B+D), WHO PS (0 or 1), disease location (head or body/tail) and RT treatment group\*timepoint interaction. Model included a random intercept for patient effect.

Global Health status	CRT without nelfinavir (n= 38)		CRT v 38)	CRT with nelfinavir (n= 38)		n= 76)	Adjusted* mean difference between arms (95% CI)
	Scores n	Median [LQ, UQ]	n	Median [LQ, UQ]	n	Median [LQ, UQ]	
Start of CRT	33	66.7 [50, 75]	30	66.7 [58.3, 83.3]	63	66.7 [50, 83.3]	-
End of CRT	21	66.7 [50, 83.3]	21	66.7 [58.3, 83.3]	42	66.7 [50, 83.3]	0.69 (-10.16, 11.53)
6 weeks post-CRT	25	75 [58.3, 83.3]	24	75 [58.3, 83.3]	49	75 [58.3 <i>,</i> 83.3]	-4.37 (-14.31, 5.56)
18 weeks post-CRT	14	66.7 [58.3, 75]	14	66.7 [58.3, 75]	28	66.7 [58.3, 75]	-4.94 (-18.12, 8.23)
28 weeks post-CRT	11	75 [50, 83.3]	9	66.7 [50, 75]	20	66.7 [50, 83.3]	-6.47 (-21.84, 8.89)

**Supplementary table 19: EORTC QLQ-C30 score by nelfinavir use.** \*Model adjusting for time point (end of CRT/6/18/28 weeks post-CRT), GHS score at the start of CRT, RT treatment group (arms A+B vs C+D), nelfinavir assignment (arms A+C or B+D), WHO PS (0 or 1), disease location (head or body/tail) and RT treatment group\*timepoint interaction. Model included a random intercept for patient effect.

EQ5D index score	CRT without 38)	CRT without nelfinavir (n= 38)		nelfinavir (n= 38)	Total (n=76)		Adjusted* mean difference between arms (95% CI)
	Scores available n	Median [LQ, UQ]	Scores available n	Median [LQ, UQ]	Scores available n	Median [LQ, UQ]	
Start of CRT	31	.8 [.72, .88]	30	.8 [.67, .84]	61	.8 [.71, .88]	-
End of CRT	19	.8 [.57, .88]	23	.8 [.66, .91]	42	.8 [.66, .88]	.03 (13, .19)
6 weeks post-CRT	24	.74 [.63, .94]	25	.78 [.72, .85]	49	.78 [.66, .88]	.1 (05, .25)
18 weeks post-CRT	16	.71 [.34, .8]	18	.72 [.62, .8]	34	.71 [.58, .8]	.01 (16, .18)
28 weeks post-CRT	19	.62 [0, .77]	18	0 [0, .74]	37	.5 [0, .77]	13 (29, .04)

Supplementary table 20: EQ-5D-5L score by nelfinavir use. \*Model adjusting for time point (end of CRT/6/18/28 weeks post-CRT), GHS score at the start of CRT, RT treatment group (arms A+B vs C+D), nelfinavir assignment (arms A+C or B+D), WHO PS (0 or 1), disease location (head or body/tail) and RT treatment group\*timepoint interaction. Model included a random intercept for patient effect.

Scale	Pre- CRT score med	lian [LQ,UQ]	Adjusted* mean difference between RT arms (95% CI)					
	50.4 Gy in 28# (n= 45)	60 Gy in 30# (n= 46)	End of CRT	6 weeks post-CRT	18 weeks post-CRT	28 weeks post-CRT		
pancreatic pain	12.5 [8.3, 25]	8.3 [0, 25]	1.28 (-9.02, 11.58)	6.28 (-3.55, 16.1)	11.09 (-1.53, 23.72)	21.59 (7.69, 35.49)		
eating related items	16.7 [0, 33.3]	16.7 [0, 33.3]	-1.91 (-14.9, 11.08)	-1.21 (-13.59, 11.17)	-5.99 (-21.93, 9.95)	4.95 (-12.62, 22.52)		
Hepatic	0 [0, 8.3]	0 [0, 16.7]	-7.36 (-15.34, .61)	-1.04 (-8.62, 6.54)	6.32 (-3.73, 16.37)	21 (-11.26, 10.85)		
altered bowel habit	33.3 [8.3, 41.7]	33.3 [16.7, 50]	3.04 (-9.26, 15.33)	13.77 (2.1, 25.45)	16.99 (1.58, 32.4)	12.52 (-4.33, 29.37)		
body image	33.3 [16.7, 66.7]	33.3 [16.7, 66.7]	-5 (-18.19, 8.18)	-13.17 (-25.8,54)	-11.48 (-28.17, 5.22)	-8.33 (-26.47, 9.81)		
health care satisfaction	100 [83.3, 100]	100 [83.3, 100]	-11.49 (-27.84, 4.87)	12.35 (-3.45, 28.14)	10.47 (-9.87, 30.81)	-5.08 (-27.48, 17.33)		
Sexuality	33.3 [0, 100]	50 [0, 100]	7.08 (-11.52, 25.67)	-8.66 (-26.91, 9.59)	-29.11 (-52.69, -5.53)	-4.65 (-29.95, 20.66)		
swollen abdomen	0 [0, 33.3]	0 [0, 33.3]	.51 (-12.88, 13.9)	.6 (-12.15, 13.36)	15.17 (-1.3, 31.63)	10.98 (-7.16, 29.12)		
taste changes	33.3 [0, 33.3]	33.3 [0, 66.7]	-6.1 (-21.92, 9.71)	-9 (-24.01, 6)	-4.7 (-23.91, 14.51)	-4.24 (-25.41, 16.93)		
Indigestion	0 [0, 33.3]	0 [0, 33.3]	-6.18 (-18.36, 6.01)	-4.43 (-15.93, 7.08)	-1.58 (-16.39, 13.24)	4.11 (-12.27, 20.49)		
Flatulence	33.3 [0, 66.7]	33.3 [0, 66.7]	-2.12 (-17.21, 12.97)	4.77 (-9.43, 18.98)	12.11 (-6.77, 30.99)	-10.48 (-31.37, 10.41)		
weight loss	0 [0, 33.3]	0 [0, 33.3]	-6.59 (-20.37, 7.19)	-14.49 (-27.61, -1.37)	-12.17 (-29.35, 5.02)	-12.03 (-30.91, 6.84)		

Scale	Pre- CRT score med	lian [LQ,UQ]	Adjusted* mean difference between RT arms (95% CI)					
	50.4 Gy in 28# (n= 45)	60 Gy in 30# (n= 46)	End of CRT	6 weeks post-CRT	18 weeks post-CRT	28 weeks post-CRT		
loss of muscle strength	33.3 [16.7, 33.3]	33.3 [0, 66.7]	4.65 (-8.94, 18.23)	.11 (-12.96, 13.18)	-7.19 (-23.58, 9.2)	10.26 (-7.43, 27.94)		
dry mouth	16.7 [0, 33.3]	33.3 [0, 33.3]	6.43 (-6.06, 18.92)	-6.96 (-19.02, 5.1)	-4.59 (-20.1, 10.92)	-4.62 (-21.5, 12.26)		
burden of treatment	33.3 [33.3, 66.7]	33.3 [33.3, 33.3]	-12.77 (-26.33, .79)	5.99 (-7.48, 19.47)	-11.01 (-28.27, 6.26)	-10.6 (-29.13, 7.94)		
fear of future health	33.3 [33.3, 66.7]	33.3 [33.3, 66.7]	-4.9 (-20.17, 10.38)	-10.35 (-25.24, 4.53)	-5.75 (-24.74, 13.25)	.57 (-20.36, 21.51)		
ability to plan future	50 [33.3, 66.7]	33.3 [0, 66.7]	3.47 (-13.47, 20.41)	9.48 (-6.83, 25.79)	11 (-21.82, 21.61)	23.03 (-1.23, 47.28)		

Supplementary table 21: Adjusted mean difference in EORTIC-PAN26 score immediately, 6-, 18- and 28- weeks following standard (50.4Gy in 28 fractions) and high (60Gy in 30 fractions) dose chemoradiotherapy. \*Model adjusting for time point (end of CRT/6/18/28 weeks post-CRT), GHS score at the start of CRT, RT treatment group (arms A+B vs C+D), nelfinavir assignment (arms A+C or B+D), WHO PS (0 or 1), disease location (head or body/tail) and RT treatment group\*timepoint interaction. Model included a random intercept for patient effect.

Scale	Pre- CRT score media	an [LQ,UQ]	Adjusted* mean difference between nelfinavir arms (95% CI)						
	CRT without	CRT with	End of CRT	6 weeks post-CRT	18 weeks post-CRT	28 weeks post-CRT			
	nelfinavir (n= 38)	nelfinavir (n= 38)							
pancreatic pain	8.3 [0, 16.7]	8.3 [8.3, 33.3]	5.02 (-6.9, 16.94)	2.67 (-8.39, 13.73)	-1.98 (-15.85, 11.89)	2.97 (-13.22, 19.17)			
eating related items	16.7 [0, 33.3]	16.7 [0, 33.3]	3.27 (-10.82, 17.37)	12.64 (56, 25.85)	-5.04 (-21.72, 11.64)	13.43 (-6.05, 32.91)			
Hepatic	0 [0, 16.7]	0 [0, 16.7]	-3.5 (-12.38, 5.38)	7.36 (89, 15.62)	7.71 (-3.15, 18.57)	-4.76 (-17.35, 7.84)			
altered bowel habit	33.3 [16.7, 50]	33.3 [0, 50]	2.72 (-10.3, 15.74)	-12.15 (-24.23,07)	-14.41 (-30.49, 1.66)	-12.33 (-30.95, 6.29)			
body image	33.3 [16.7, 66.7]	33.3 [16.7, 66.7]	14.32 (.62, 28.01)	83 (-13.66, 12)	14.55 (-2.11, 31.22)	2.74 (-16.42, 21.9)			
health care satisfaction	100 [83.3, 100]	100 [83.3, 100]	-8.9 (-26.39, 8.59)	-9.12 (-25.76, 7.52)	-20.27 (-41.73, 1.18)	-17.79 (-42.37, 6.79)			
Sexuality	33.3 [0, 100]	33.3 [0, 100]	-11.16 (-30.9, 8.58)	-3.48 (-22.73, 15.76)	-9.08 (-33.69, 15.52)	2.78 (-23.91, 29.47)			
swollen abdomen	0 [0, 33.3]	0 [0, 33.3]	8.6 (-5.09, 22.29)	3.41 (-9.29, 16.11)	4.72 (-11.64, 21.07)	1.33 (-17.88, 20.55)			
taste changes	33.3 [0, 33.3]	33.3 [0, 66.7]	27.2 (10.29, 44.1)	11.27 (-4.51, 27.06)	53 (-20.34, 19.28)	5.56 (-17.54, 28.66)			
Indigestion	0 [0, 33.3]	0 [0, 33.3]	1.38 (-11.67, 14.44)	3.91 (-8.27, 16.08)	14.99 (25, 30.23)	-8.1 (-25.95, 9.76)			
Flatulence	33.3 [0, 66.7]	33.3 [0, 66.7]	-2.32 (-18.04, 13.4)	-8.72 (-23.31, 5.87)	.32 (-18.64, 19.28)	-16.13 (-38.38, 6.11)			

Scale	Pre- CRT score median [LQ,UQ]		Adjusted* mean difference between nelfinavir arms (95% CI)			
	CRT without	CRT with	End of CRT	6 weeks post-CRT	18 weeks post-CRT	28 weeks post-CRT
	nelfinavir (n= 38)	nelfinavir (n= 38)				
weight loss	33.3 [0, 33.3]	0 [0, 33.3]	12.76 (-2.43, 27.95)	9.8 (-4.22, 23.83)	12.03 (-6.28, 30.34)	16.61 (-4.47, 37.69)
loss of muscle strength	33.3 [33.3, 66.7]	33.3 [33.3, 66.7]	8.46 (-6.21, 23.14)	10.71 (-3.16, 24.57)	8.97 (-8.36, 26.3)	.84 (-18.81, 20.5)
dry mouth	33.3 [0, 33.3]	33.3 [0, 33.3]	3.6 (-9.47, 16.68)	4.27 (-7.99, 16.54)	17.26 (1.39, 33.12)	1.36 (-16.98, 19.71)
burden of treatment	33.3 [33.3, 66.7]	33.3 [33.3, 66.7]	19.27 (4.11, 34.43)	20.15 (5.45, 34.86)	6.49 (-12.28, 25.26)	14.75 (-6.6, 36.1)
fear of future health	66.7 [33.3, 83.3]	33.3 [33.3, 66.7]	3.59 (-12.73, 19.9)	-3.59 (-19.28, 12.09)	-7.17 (-26.98, 12.64)	7.67 (-14.98, 30.32)
ability to plan future	33.3 [33.3, 66.7]	33.3 [0, 66.7]	13.43 (-3.62, 30.48)	4.83 (-11.22, 20.89)	06 (-21.37, 21.25)	2.92 (-21.86, 27.69)

Supplementary table 22: Adjusted mean difference in EORTIC-PAN26 score immediately, 6-, 18- and 28- weeks following chemoradiotherapy with and without concurrent nelfinavir. \*Model adjusting for time point (end of CRT/6/18/28 weeks post-CRT), GHS score at the start of CRT, RT treatment group (arms A+B vs C+D), nelfinavir assignment (arms A+C or B+D), WHO PS (0 or 1), disease location (head or body/tail) and RT treatment group\*timepoint interaction. Model included a random intercept for patient effect.