Table 1: Patient characteristics

Patient characteristics.

Characteristics	Elderly (≥75 year old) $N = 145$	Non-elderly (<75 year old) $N = 665$	p-Value[a]
Age			
Median (range)	78 (75–92)	60 (15–74)	<0.001
Gender			
Male	74 (51.0%)	357 (53.7%)	0.56
Female	71 (49.0%)	308 (46.3%)	
Primary tumour location			
Gastric	93 (64.1%)	371 (55.8%)	0.19
Small bowel	28 (19.3%)	159 (23.9%)	
Duodenal	5 (3.4%)	51 (7.7%)	
Oesophagus	2 (1.4%)	6 (0.9%)	
Rectum	12 (8.3%)	41 (6.2%)	
Colon	0 (0.0%)	8 (1.2%)	
Other	5 (3.4%)	29 (4.4%)	
Tumour size in mm at baseline			
Median (range)	81 (4–290)	90 (2–340)	0.79
Tumour status at registry entry			
Localised disease	75 (50.8%)	338 (51.7%)	0.95
Locally advanced[b]	30 (22.6%)	150 (20.7%)	
Metastatic disease	36 (24.4%)	162 (24.8%)	
Other/not reported	4 (2.8%)	15 (2.3%)	
Tumour histology			
Spindle cell	89 (61.4%)	419 (63.0%)	0.51
Epithelioid	14 (9.7%)	51 (7.7%)	
Mixed type	12 (8.3%)	72 (10.8%)	
Not reported	30 (20.6%)	123 (19.4%)	
Number of mitoses per 5 mm^2			
≤5 mitoses	68 (46.9%)	335 (50.4%)	0.59
>5 mitoses	36 (24.8%)	200 (30.1%)	
Not reported	41 (28.2%)	130 (19.6%)	
Risk category			
Low risk	88 (60.7%)	376 (56.6%)	0.38
High risk	34 (23.4%)	194 (29.2%)	
Unknown	23 (15.9%)	95 (14.3%)	
Mutation status			
KIT mutation			
Exon 11	66 (45.5%)	317 (47.7%)	0.72
Exon 9	6 (4.1%)	37 (5.6%)	
Exon 13	2 (1.4%)	7 (1.1%)	
Exon 17	0 (0.0%)	3 (0.5%)	
Not further specified			
PDGFRA mutation	2 (1.4%)	6 (0.9%)	
Exon 18	12 (8.3%)	52 (7.8%)	
Exon 14	0 (0.0%)	4 (0.6%)	
Exon 12	2 (1.4%)	5 (0.8%)	
Not further specified	1 (0.7%)	2 (0.3%)	
WT for KIT and PDGFRA	7 (4.8%)	58 (8.7%)	
Unknown mutation	47 (32.4%)	174 (26.2%)	
Baseline WHO performance status			
WHO ≤ 1	62 (42.8%)	290 (43.6%)	0.045
WHO ≥ 2	13 (9.0%)	27 (4.1%)	
Not reported	70 (48.3%)	348 (52.3%)	
Age-adjusted Charlson comorbidity index score			
≤5	109 (75.2%)	633 (95.2%)	<0.001
>5	36 (24.8%)	32 (4.8%)	
Charlson comorbidity index score without age			
≤5	139 (95.9%)	650 (97.7%)	0.20
>5	6 (4.1%)	15 (2.3%)	
Baseline albumin level	41 (25–50)	43 (20–62)	0.04

[a] Univariate analyses using Chi-square test for categorical variables and Mann–Whitney U for continuous variables.
[b] Defined as GISTs needing neo-adjuvant imatinib treatment before surgery is deemed possible or safe.

Table 2: Treatments given in patients with localised disease

Treatment*	Elderly *N*=107	Non-elderly *N*=500	*p*-value[†]
Systemic treatment with imatinib	53 (49.5%)	270 (54.0%)	0.40
Neo-adjuvant	32 (29.9%)	163 (32.6%)	0.59
Adjuvant [‡]	6 (37.5%)	52 (65.8%)	0.03
Palliative	18 (16.8%)	51 (10.2%)	0.05
Surgery	61 (57.0%)	420 (84.0%)	<0.001

*Note that the numbers don't add up since multiple treatments can be given consecutively in one individual patient. [†]Adjuvant treatment is only calculated in high risk GIST patients with a registration date after March 2011 who had surgery (*n*=16 in elderly patients and *n*=79 in non-elderly patient). [‡] Univariate analyses using Chi-square test

Table 3: Surgery type and outcome in patients with localised disease

Surgery characteristics	Elderly *N* = 61	Non-elderly *N* = 420	*p*-Value[a]
Reason for surgery			
Planned operation for GIST	46 (75.4%)	316 (75.4%)	0.37
Planned for other tumour	6 (9.8%)	63 (15.0%)	
Emergency	8 (13.1%)	28 (6.7%)	
Other/Unknown	0 (0.0%)	13 (3.0%) 13?	
Surgery technique			
Open laparotomy	54 (88.5%)	355 (84.5%)	0.82
Laparoscopy	5 (8.2%)	45 (10.7%)	
Endoscopy	1 (1.6%)	7 (1.7%)	
Unknown	1 (1.6%)	13 (3.1%)	
Surgery type			
Limited or local surgery	49 (80.3%)	347 (82.6%)	0.09
Typical organ resection	8 (13.1%)	23 (5.5%)	
Multivisceral resection	4 (6.6%)	37 (8.8%)	
Other/Unknown	0 (0.0%)	13 (3.1%)	
Tumor size resected			
<100 mm	41 (67.2%)	268 (63.8%)	0.68
≥100 mm	15 (24.6%)	112 (26.7%)	
Unknown	5 (8.2%)	40 (9.5%)	
Tumor rupture			
No	45 (73.8%)	309 (73.6%)	0.64
Yes, pre-operative	5 (8.2%)	21 (5.0%)	
Yes, intraoperative	3 (4.9%)	20 (4.8%)	
Unknown	8 (13.1%)	70 (16.7%)	
Surgery result			
R0	56 (91.8%)	365 (86.9%)	0.47
R1	4 (6.6%)	26 (6.2%)	
R2	0 (0.0%)	10 (2.4%)	
Unknown	1 (1.65)	19 (4.5%)	
Perioperative complications			
No	42 (68.9%)	309 (73.6%)	0.16
Yes, but not leading to reoperation	9 (14.8%)	36 (8.6%)	
Yes, leading to reoperation	6 (9.8%)	18 (4.3%)	
Other/unknown	4 (6.6%)	57 (13.6%)	

[a] Univariate analyses using Chi-square test.
[b] Preoperative tumour rupture is defined as tumour rupture causing visual (perioperative or on preoperative imaging scans) spill or described by the pathologist as an entire interruption of the tumour wall and was preexisting before surgery (as described in the surgical report).

Table 4: Treatments in patient with metastatic disease

Treatment*	Elderly *N*=36	Non-elderly *N*=162	*p*-value[†]
Systemic treatment	31 (86.1%)	150 (92.6%)	0.21
Imatinib	*31 (86.1%)*	*147 (90.7%)*	*0.40*
Sunitinib	*10 (27.8%)*	*54 (33.3%)*	*0.52*
Regorafenib	1 (2.8%)	*17 (10.5%)*	*0.15*
Metastasectomy	3 (5.9%)	23 (8.3%)	0.55

*Note that the numbers don't add up since multiple treatments can be given consecutively in one individual patient. [†] Univariate analyses using Chi-square test

Table 5: Occurrence of adverse events grade ≥3 related to imatinib treatment

Adverse events	Elderly patients *N*=85	Non-elderly patients *N*=415
Nausea	1 (1.2%)	8 (1.9%)
Fatigue	2 (2.4%)	5 (1.2%)
Diarrhea	-	5 (1.2%)
Skin toxicity	5 (5.9%)	7 (1.7%)
Arthralgia	-	1 (0.2%)
Infection	3 (3.5%)	10 (2.4%)
Neutropenia	1 (1.2%)	5 (1.2%)
Gastrointestinal hemorrhage	-	8 (1.9%)
Periorbital edema	1 (1.2%)	1 (0.2%)
Pain	-	7 (1.7%)
Generalized edema	-	1 (0.2%)
Anemia	9 (10.6%)	16 (3.9%)
Ascites	1 (1.2%)	6 (1.4%)
Myalgia	-	1 (0.2%)
Increase in creatinine	-	9 (2.2%)
Dyspnea	2 (2.4%)	3 (0.5%)
Thrombocytopenia	-	1 (0.2%)
Other	6 (7.1%)	24 (5.8%)
Total*	**22 (25.9%)**	**84 (20.2%)**

*Note that the total number of patients does not add up since multiple adverse events can occur in one patient.

Fig. 1: Difference in duration of follow-up care between elderly and non-elderly patients with localised disease.

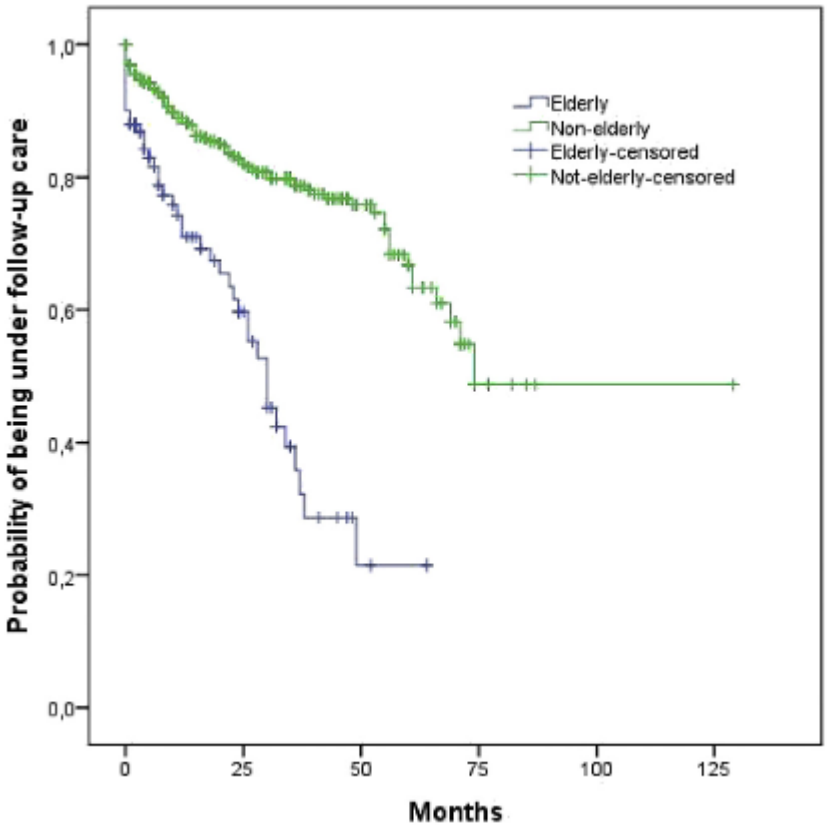

Fig. 2. Difference in progression-free survival between elderly patients and non-elderly patients with metastatic disease.

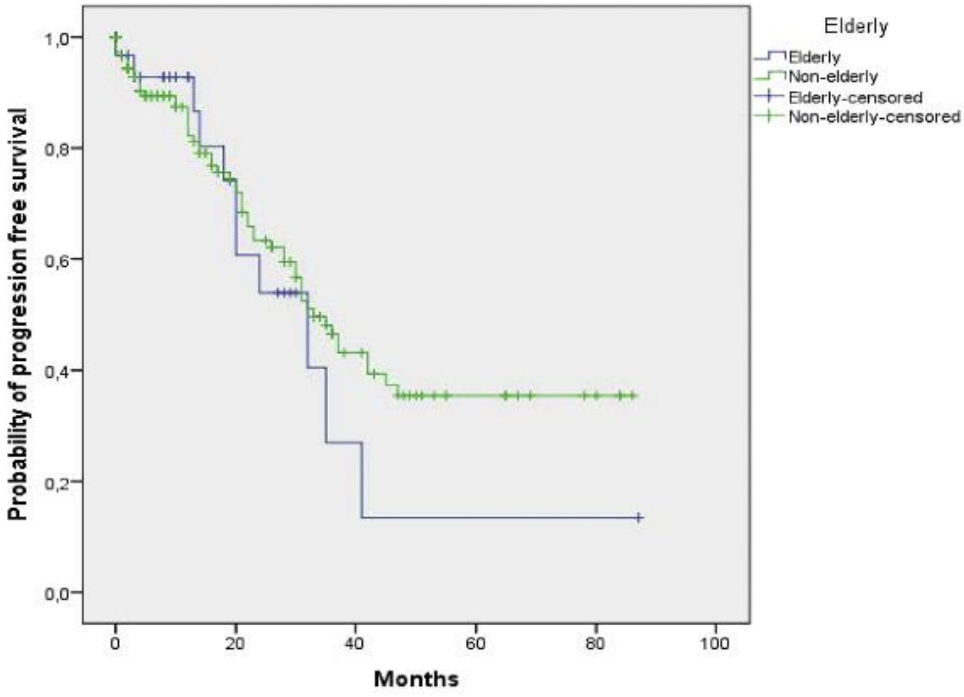

Fig. 3. Difference in overall survival between elderly and non-elderly patients with metastatic disease.