SUPPLEMENTAL MATERIAL to

Theranostics with somatostatin receptor antagonists in SCLC: Correlation of ^{68}Ga-SSO120 PET with immunohistochemistry and survival

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Supplemental Table S1: Patient Characteristics

Age (y)	
median (range)	65 (50-81)
Sex (n)	
male (%)	24 (44.4)
female (%)	30 (55.6)
T (n)	
1 (%)	7 (13.0)
2 (%)	6 (11.1)
3 (%)	8 (14.8)
4 (%)	33 (61.1)
N (n)	
0 (%)	4 (7.4)
1 (%)	2 (3.7)
2 (%)	20 (37.0)
3 (%)	28 (51.9)
M (n)	
0 (%)	21 (38.9)
1 (%)	33 (61.1)
1a (%)	5 (9.2)
1b (%)	7 (13.0)
1c (%)	21 (38.9)

Clinical characteristics of included patients

Supplemental Table S2: Univariate Cox Regression Analysis for OS and TTF (continuous variables)

	HR TTF (95%-CI)	*P* (TTF)	HR OS (95% CI)	*P* (OS)
SSTR2 expression in IHC	0.71 (0.51-0.98)	0.037*	0.61 (0.40-0.93)	0.021*
Hottest lesion SUV_{max}	0.98 (0.96-1.00)	0.047*	0.98 (0.96-1.01)	0.132
Hottest lesion TLR_{peak}	0.94 (0.87-1.02)	0.117	0.91 (0.83-1.00)	0.034*
Whole-body tumor SUV_{mean}	0.97 (0.90-1.05)	0.451	0.96 (0.87-1.05)	0.316
Whole-body tumor TLR_{mean}	0.92 (0.78-1.08)	0.275	0.86 (0.71-1.02)	0.088

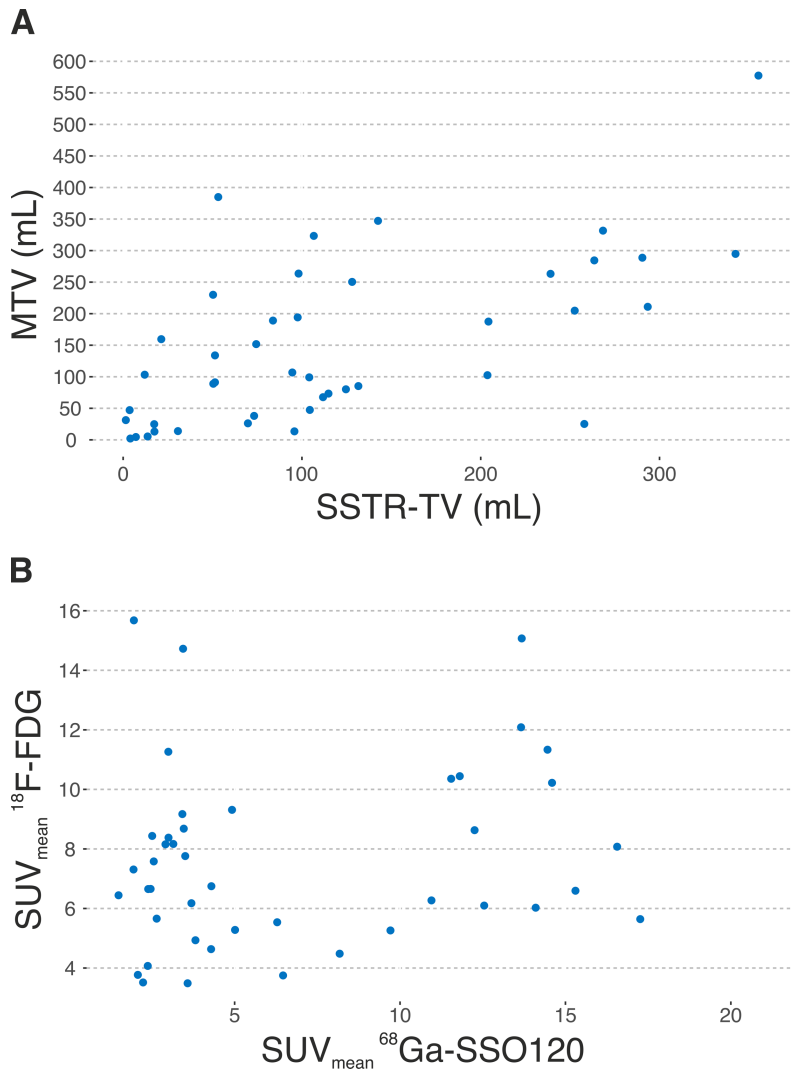
Results of Cox-regression analyses of parameters of SSTR2 expression (continuous variables) for both TTF and OS. The table indicates Hazard ratios (HR), and *p*-values.*: $p < 0.05$.

Supplemental Table S3: Comparison of OS and TTF (Stratified Cox analysis)

	HR TTF (95%-CI)	*P* (TTF)	HR OS (95% CI)	*P* (OS)
SSTR2 expression in IHC (score >0)				
No SSTR2 expression in IHC	0.32 (0.12-0.87)	0.0244 *	0.32 (0.09-1.09	0.0684
High hottest lesion SUV_{max} (>27.6)				
Low hottest lesion SUV_{max}	0.75 (0.33-1.72)	0.499	0.45 (0.16-1.21)	0.113
High hottest lesion TLR_{peak} (>2.9)				
Low hottest lesion TLR_{peak}	0.63 (0.28-1.41)	0.259	0.30 (0.09 0.97)	0.0431*
High whole-body tumor TLR_{mean} (>5.3)				
Low whole-body tumor TLR_{mean}	0.90 (0.32-2.50)	0.833	0.46 (0.15-1.38)	0.167
High MTV (>264 mL)				
Low MTV	0.75 (0.29-1.90)	0.539	0.39 (0.13-1.09)	0.0714
High TLG (>2807)				
Low TLG	0.48 (0.16-1.42)	0.183	0.29 (0.09-0.92)	0.034*
LDH (>418 U/l)	0.52 (0.22-1.2)	0.1	0.57(*0.22-1.42)	0.2

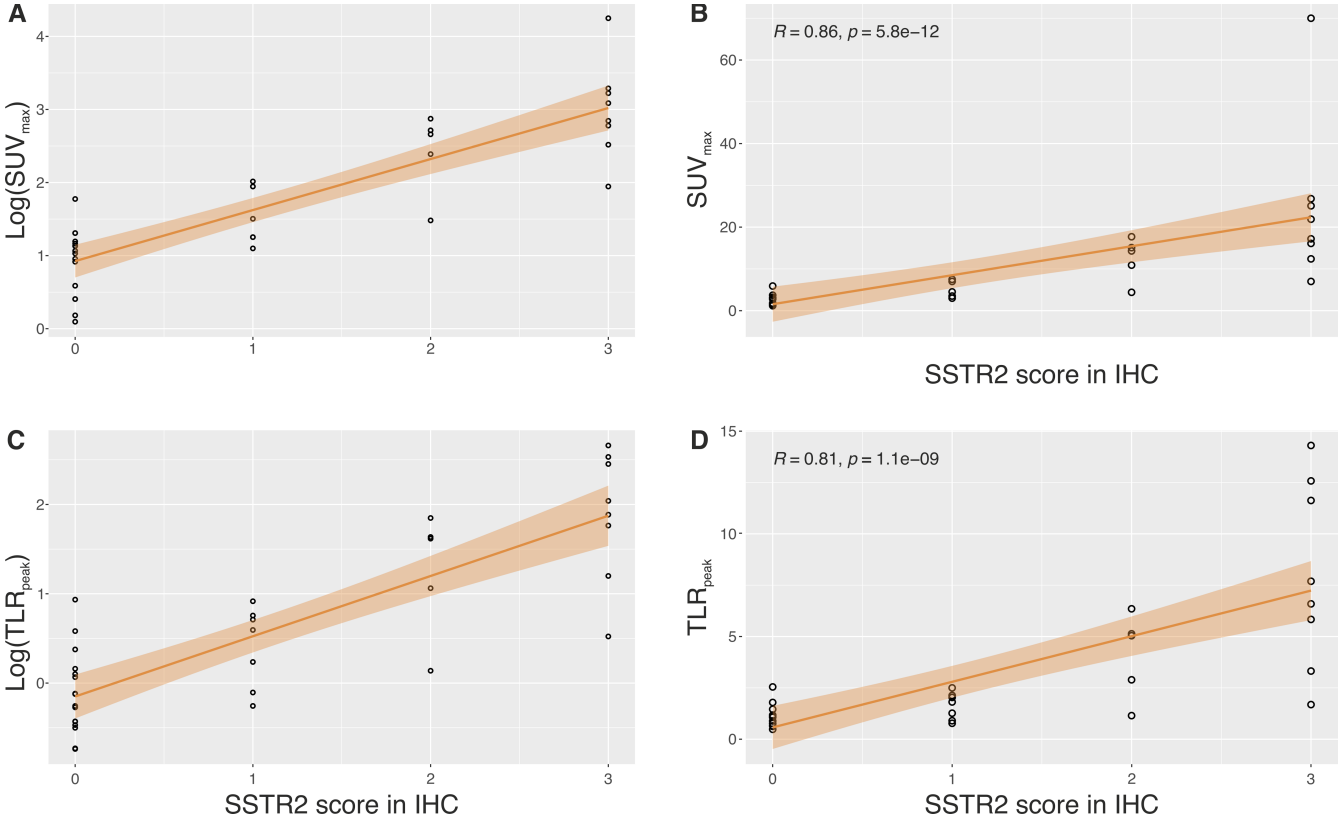
Results of Stratified Cox regression analyses of clinical, IHC-, and imaging-based parameters for both TTF and OS. The table indicates hazard ratios (HR) for different risk groups for TTF and OS and *p*-values,*: $p < 0.05$, **: $p < 0.01$.

Supplemental Figure S1: ^{68}Ga-SSO120 PET versus ^{18}F-FDG PET



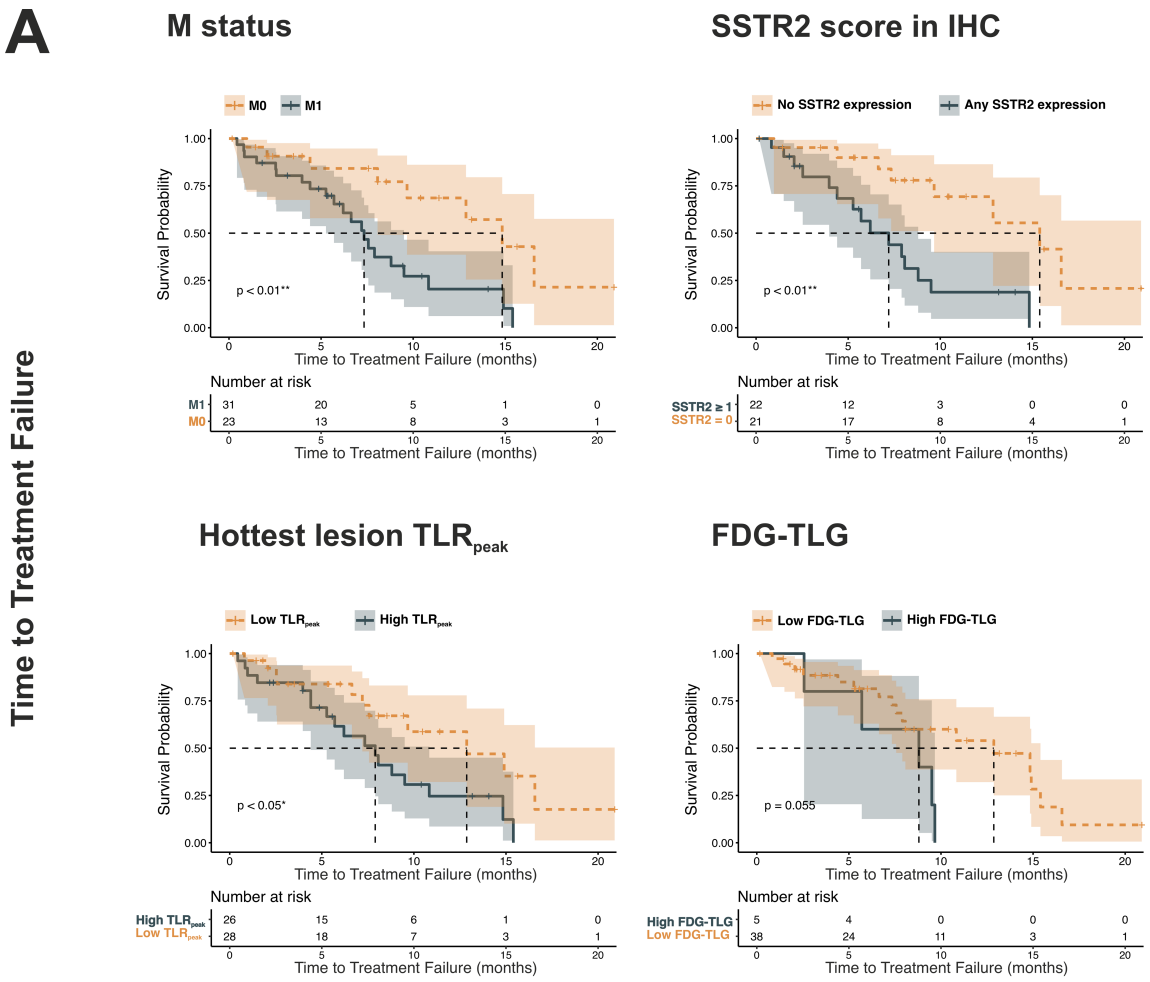
(A) Scatter plot comparing SSTR2-TV and MTV. (B) Scatter plot comparing whole-body tumor SUV_{mean} from ^{68}Ga-SSO120 PET with ^{18}F-FDG PET.

Supplemental Figure S2: Relationship between SUV_{max}/TLR_{peak} and SSTR2 score



(A) Correlation of log-transformed SUV_{max} with SSTR2 score in IHC. (B) Spearman correlation analysis of SUV_{max} and SSTR2 score in IHC. (C) Correlation of log-transformed TLR_{peak} with SSTR2 score in IHC. (D) Spearman correlation analysis of TLR_{peak} and SSTR2 score in IHC.

Supplemental Figure S3: Survival analyses for TTF



B

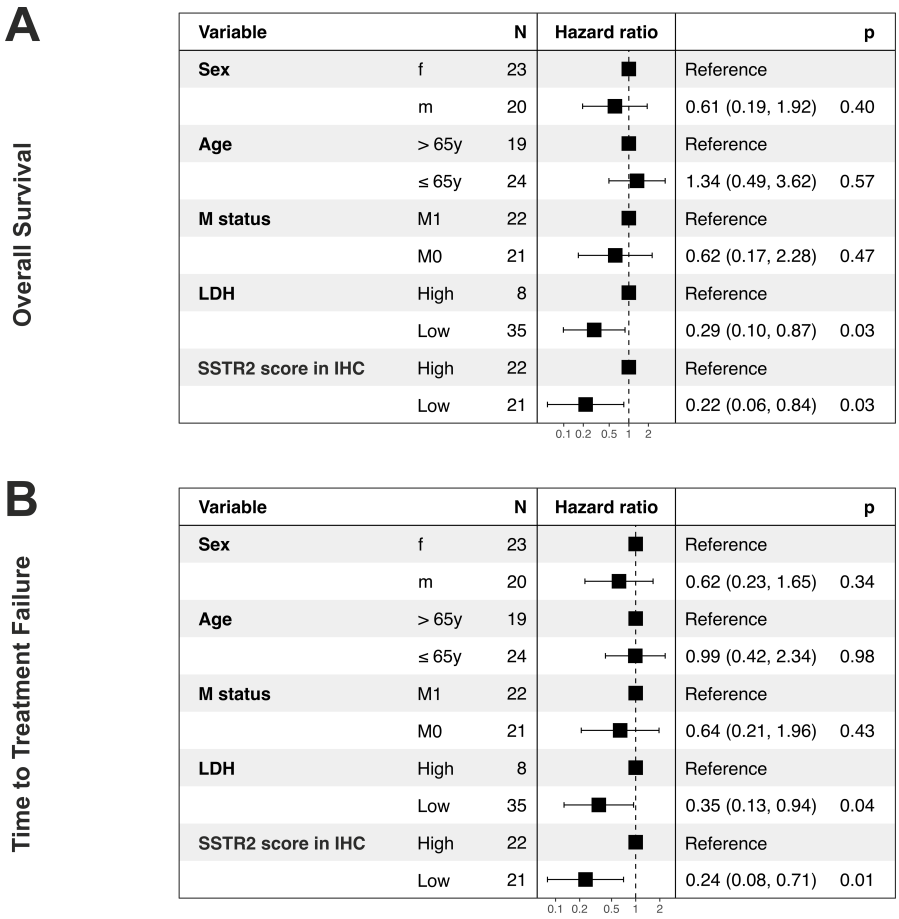
Time to Treatment Failure

Variable		N	Hazard ratio	p
Sex	f	30	Reference	
	m	24	0.67 (0.30, 1.52)	0.34
Age	> 65y	24	Reference	
	≤ 65y	30	1.09 (0.50, 2.37)	0.82
M status	M1	31	Reference	
	M0	23	0.50 (0.19, 1.37)	0.18
LDH	High	10	Reference	
	Low	44	0.41 (0.17, 0.99)	0.05
Hottest lesion TLR_{peak}	High	26	Reference	
	Low	28	0.47 (0.20, 1.09)	0.08

(A): Kaplan-Meier curves illustrating TTF in correlation to M status, SSTR2 score in IHC, hottest lesion TLR_{peak}, and TLG. (B): Forest plot showing the results of the multivariate Cox regression for

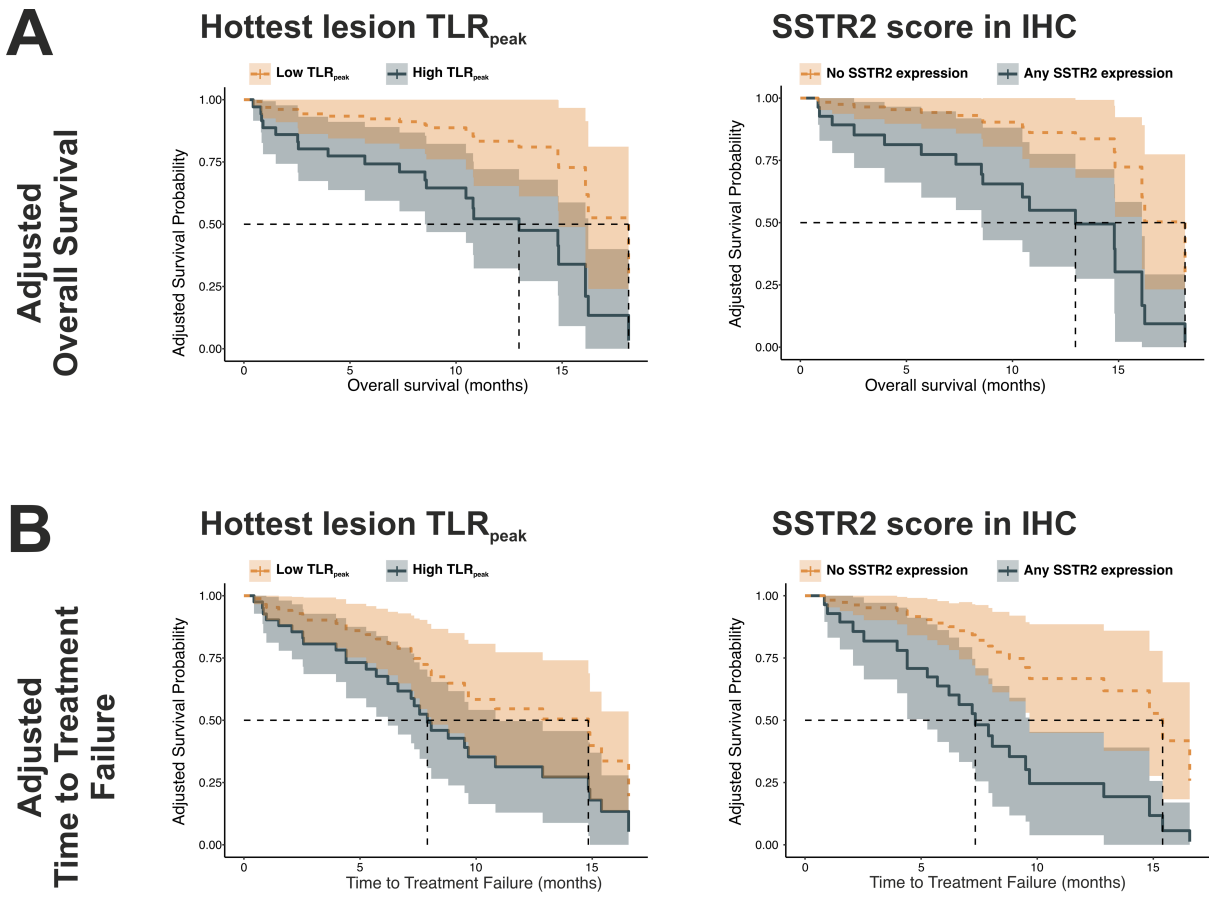
TTF (sex, age (stratified by median), M status, LDH, hottest lesion TLR_{peak}). (High LDH: >418 U/l, high hottest lesion TLR_{peak}: >2.9).

Supplemental Figure S4: Forest Plots SSTR2 Score in IHC



Forest plots showing the results of the multivariate Cox regression for (A) OS and (B) TTF (sex, age (stratified by median), M status, LDH, SSTR2 score in IHC). (High LDH: >418 U/l, high SSTR2 score in IHC: >0).

Supplemental Figure S5: Adjusted Kaplan Meier curves



Adjusted Kaplan-Meier curves for hottest lesion TLR_{peak} and SSTR2 score in IHC with (A) OS and (B) TTF.