TOaSTT UPDATE

DEGRO 2018

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UPDATE TOaSTT

Retrospective study:

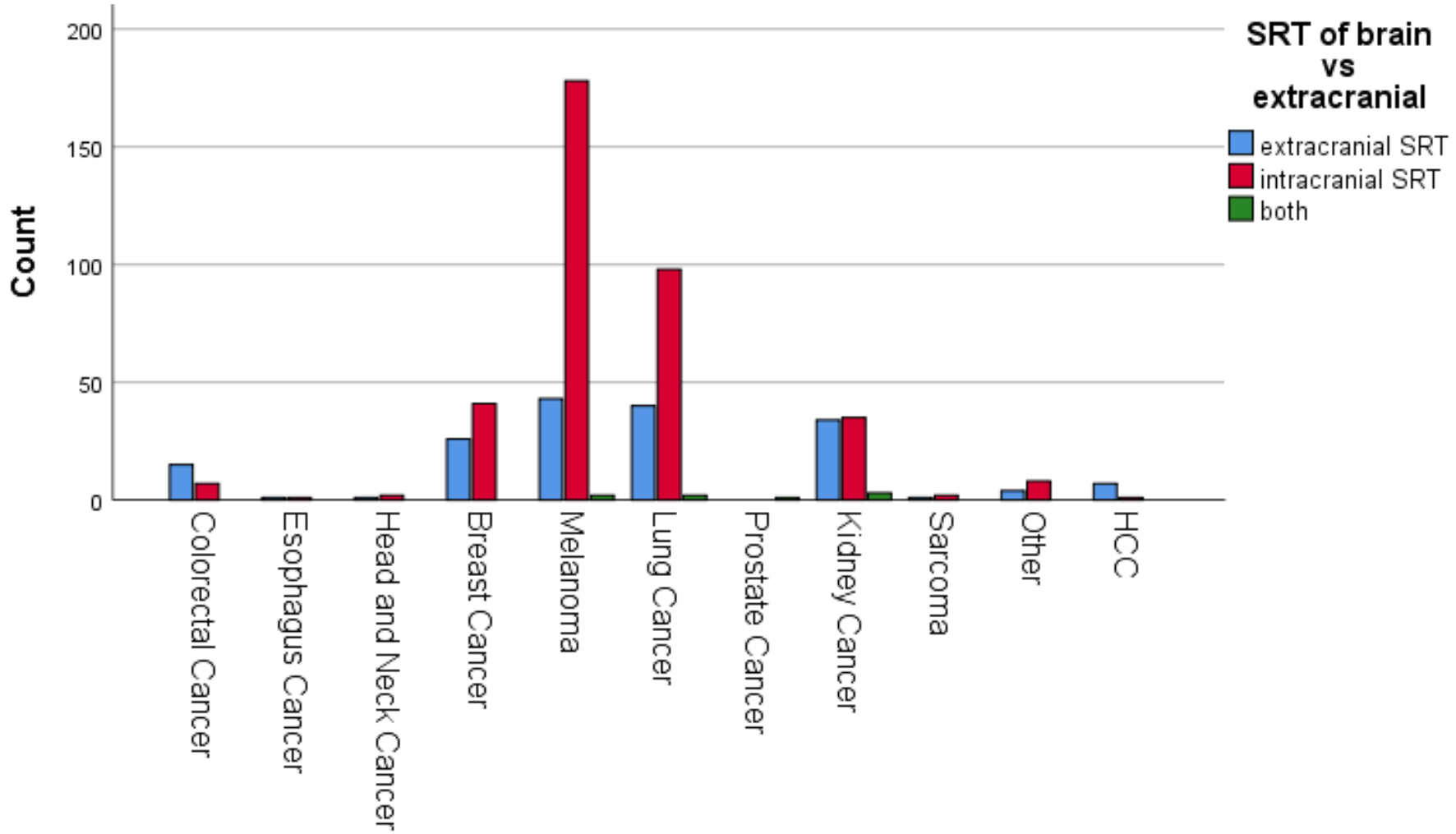
20 centers participated:

- Germany (14)
- Switzerland (2)
- Netherlands (1)
- Australia (1)
- Austria (1)
- Belgium (1)

TOaSTT Projects: retrospective

Patient characteristics	n (%) / median (range)
Patients (n)	441
Age (y)	60 (25-92)
Sex (male/female)	238/196 (54/45)
Metachronous metastatic disease	179 (41)
Synchronous metastatic disease	262 (59)
Metastatic status at time of SRT:	
Oligometastatic	110 (20)
Oligoprogressive	200 (36)
Advanced metastatic	231 (42)
Re-irradiation treatments (n):	74
Total nr of irradiated metastases (n):	1106
CNS	848
Body	258
Lymph nodes	*34*
Lung	*68*
Abdomen	*69*
Bone	*79*
Soft tissue	*17*
Other (presacral, parotid)	*3*

TOaSTT Projects: retrospective



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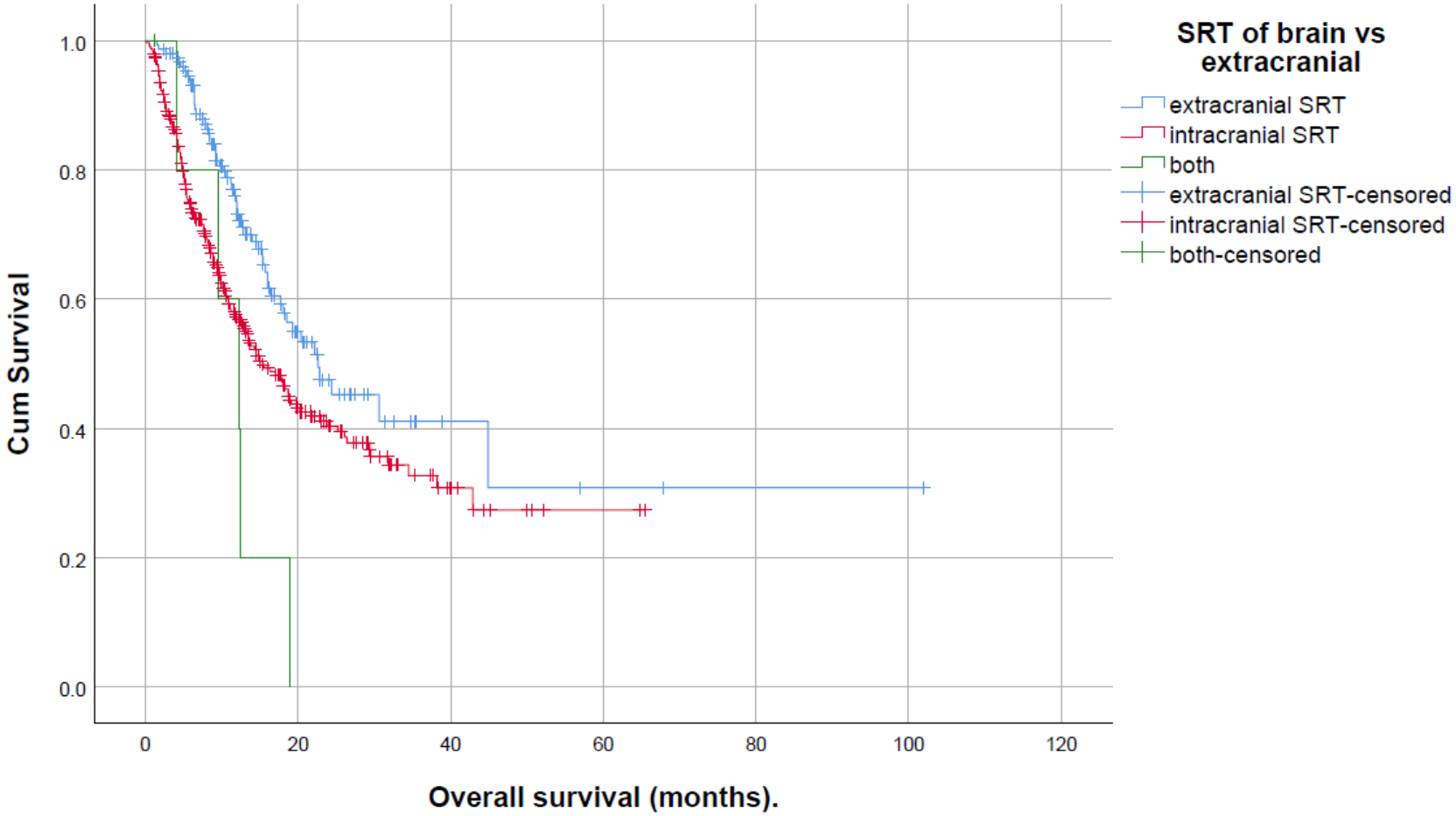
TOaSTT Projects: retrospective

Type of systemic therapy:	
TKI	
Immune checkpoint inhibitor	
Antibody	
Start of systemic therapy:	
Before SRT	
During SRT	
After SRT	
Systemic therapy paused during SRT:	
no	
yes	
unknown	

Start of

TOaSTT Projects: retrospective



- Median OS: extracranial SRT 22.6mo, intracranial SRT 15.4mo

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Start of

TOaSTT Projects: retrospective SBRT

ACUTE TOXICITY (7.8%)	3	4	5
General toxicity:			
Nausea	1	-	-
Fatigue	3	-	-
Neurological toxicity:			
Paresis	1	-	-
Polyneuropathia	1	-	-
H&N toxicity:			
Oral mucositis	1	-	-
Oral dysphagea	1	-	-
Cardiac toxicity:			
Chest pain	1	-	-
Pulmonary toxicity:		-	-
Pleural effusion	1	-	-
Abdominal toxicity:			
Diarrhea	1	-	-
Pancreatitis	1	-	-
Hepatitis	1	-	-
Dyspnea	1	-	-

LATE TOXICITY (7.8%)	3	4	5
General toxicity:			
Weight loss	1	-	-
Fatigue	1	-	-
Thromboembolic event	1	-	-
Cardiac toxicity:			
Arrhythmia	1	-	-
Pulmonary toxicity:			
Bronchopulmonary hemorrhage	-	-	1
Dyspnea	1	-	-
Pneumonitis	1	-	-
Esophageal toxicity:			
Esophageal hemorrhage	-	1	-
Esophageal perforation	-	-	1
Abdominal toxicity:			
Abdominal pain	1	-	-
Diarrhea	1	-	-
Gastritis	1	-	-
Higher gastrointestinal hemorrhage		1	
Gastric perforation			1

- N=5 grade 4/5 toxicity: liver/hilar SBRT combined with ipi/nivo, sorafenib or bevacizumab

TOaSTT Projects: retrospective brain SRT

ACUTE TOXICITY (7.8%)	3	4	5
Dysphasia	1	-	-
Dysarthria	1	-	-
Seizure	2	-	-
Headache	6	1	-
Necrosis	1	-	-
Memory impairment		-	-
Cognitive disturbance	2	-	-
Concentration impairment	2	-	-
Depressed level of consciousnesss		3	-
Cerebral edema	3	-	1
Intracranial hemorrhage	1	-	-
Cerebrovascular ischemia		1	-
Gait disturbance	1	-	-
Insomnia	3	-	-
Other	3	-	-

LATE TOXICITY (5.0%)	3	4	5
Dysphasia	1	-	-
Seizure	2	-	-
Headache	1	-	-
Necrosis	5	-	-
Cognitive disturbance	1	-	-
Concentration impairment	2	-	-
Depressed level of consciousnesss	1	-	-
Cerebral edema	1	-	-
Hydrocephalus	1	-	-
Intracranial hemorrhage	1	-	-
Cerebrovascular ischemia	-	-	1
Other	1	1	

- N=5 grade 4/5 toxicity: liver/hilar SBRT combined with ipi/nivo, sorafenib or bevacizumab

Retrospective study:

Definitive results will be analyzed in several projects:

1) Efficacy and toxicity cerebral SRT
2) Efficacy and toxicity body SRT
3) NSCLC
4) Melanoma
5) RCC
6) Etc…

ESTRO Abstracts

1) **Combined therapy for oligoprogressive NSCLC**

2) **Combined therapy for melanoma**

3) **Validation of molGPA for melanoma patients with combined therapy**

ESTRO Abstracts

1) **Combined therapy for oligoprogressive NSCLC**

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TOaSTT ESTRO Abstract: Melanoma cranial

Patient characteristics	N (%), range
Clinics	16
Patients	108
Median age	63 (33-80)
Synchronous metastatic disease	75%
Metachronous metastatic disease	25%
Driver mutations:	
EGFR	41%
ALK	14%
Other	21%
No/unknown	24%
SRT Treated lesions	192
Cranial	69%
Extracranial	31%
Median SRT treated lesions per session	1 (1-5)

- Fit patients with oligoprogressive, oligopersistant or advanced metastatic disease

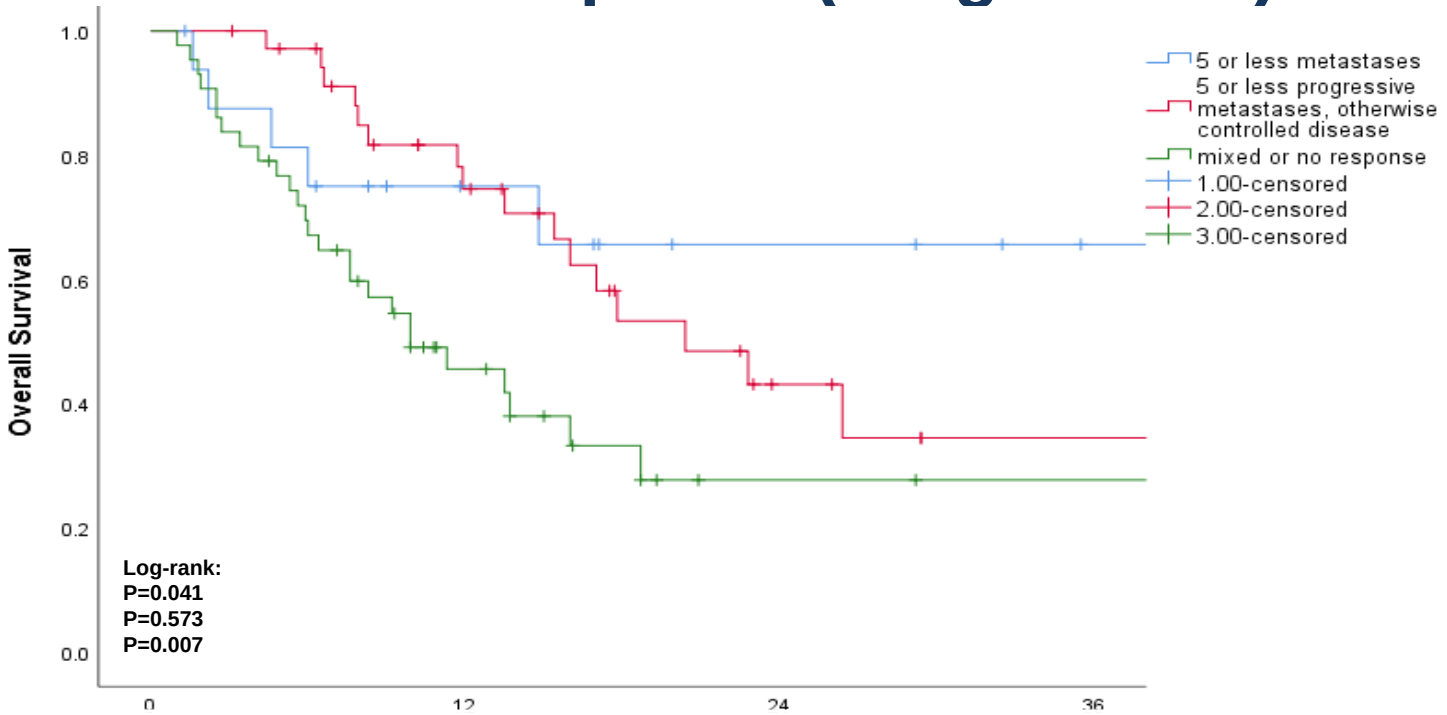
TOaSTT ESTRO Abstract: Melanoma cranial

Targeted/immunotherapies	%
Start of systemic therapy:	
Before SRT (median 5.8mo)	69
During SRT	8
After SRT (median 14d)	23
Type of systemic therapy:	
ALK- or EGFRi TKI	60
PD-1/PD-L1 inhibitor	31
anti-VEGF	9

- Majority start of targeted/immunotherapy median 5.8mo before SRT
- Majority treated with TKI

TOaSTT ESTRO abstract: oligoprogressive NSCLC

Median follow-up 18.7 (range 1-102) mo



No. at risk:			
17	8	4	1
36	21	6	2
43	13	2	2

- OS significant better in oligoprogressive and oligopersistant pts.
- After 1y 86%, 47% and 39% could continue the same syst. therapy

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TOaSTT ESTRO abstract: oligoprogressive NSCLC

ACUTE INFIELD TOXICITY	**3**	**4**	**5**
Headache	3	1	-
Gait disturbance	1	-	-
Vertigo, nausea	1	-	-
Dyspnoe	1	-	-
Thromboembolic event	1	-	-
LATE INFIELD TOXICITY	**3**	**4**	**5**
Radionecrosis	1	-	-
Vertigo, nausea	1	-	-
Hemiparesis	-	1	-
Weight loss	1	-	-

- Acute toxicity: 7%
- Late toxicity: 4%

UPDATE TOaSTT

Prospective study:

N=183

18 centers entered patients (30 joined the study):

- Germany (9)
- Switzerland (3)
- Netherlands (4)
- Belgium (1)
- Spain (1)

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Prospective study:

N=183

18 centers entered patients (30 joined the study):

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- Spain (1)

- Expected deadline 01.07.2019

UPDATE TOaSTT

DATENSCHUTZERKLÄRUNG ZUR REGISTERSTUDIE

Toxicity and efficacy of combined stereotactic radiotherapy and systemic targeted or immune therapy (TOaSTT)

Studienleiter

Prof. Dr. med. Matthias Guckenberger

UniversitätsSpital Zürich, Klinik für Radio-Onkologie

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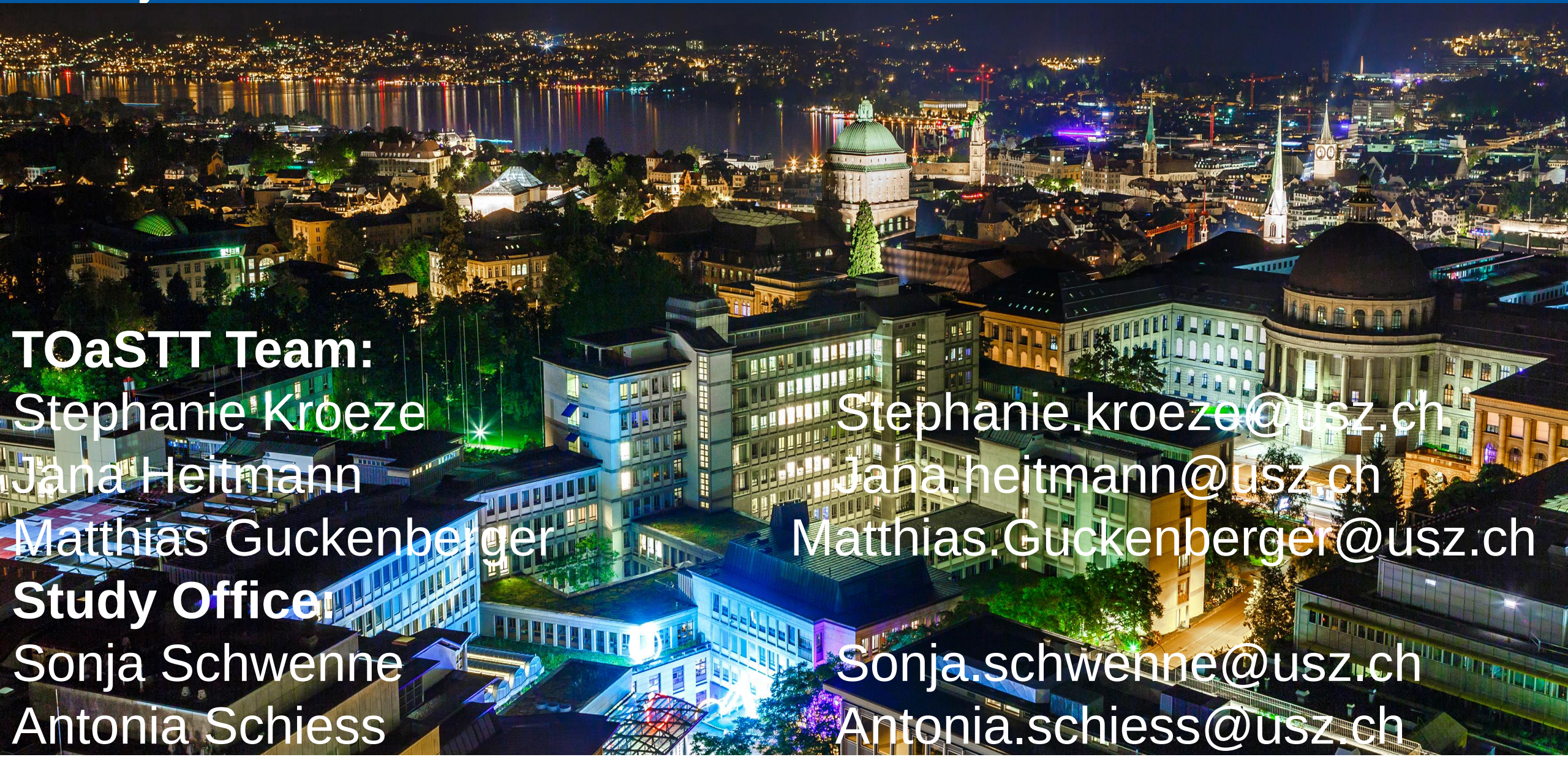
Bitte lesen Sie den folgenden Text sorgfältig, bevor Sie eine Entscheidung treffen.
Wenn Sie etwas nicht verstehen, fragen Sie bitte den für Sie zuständigen Arzt.

Sehr geehrter Patient,

- DSGVO: Example letter is supplied

Thank you



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