ID 19

GSI Medical Documentation Pig Uniform

Time of arrival at GSI: 10:53 **Weight [kg]** 39,1

Vital functions (arrival, in cave, immobilization, positioning, field #1, field #2)

TIME	11:08	11:20	12:10	12:22		
HR	47	34	66	66		
Temp						
SpO2	96	98	100	99		

Premedication:
Ketamin [mg] 100 Diazepam [mg] 15 Azaperon [mg] 160
+ 160 (11:01)

Preparation:

- ☑ Place IV in ear vein ☑ Intubate pig ID 7.0 ET
- ☐ Shave ECG areas ☑ Start 0.9% saline iv.
- ☑ Start propofol [ml/KG/min] 0,19

11:05 Propofol
11:20 80 mg Propofol
0,19 ml/kg/min

Drawing of venous blood samples before immobilization
For immediate centrifugation @ 2800 rpm:
☑ 2x for Citrate ☑ 2x EDTA ☑ 2x Li-Hep
For centrifugation after 30 min @ 2800 rpm: ☑ 2x Serum

Transfer to cave

- ☑ Establish ECG monitoring: 3 ECG surface leads at shaved locations

Respiration: ☒ 14 l/min, IPPV, V_t = 350, PEEP 0 ☐ other: _____

Irradiation

Drawing of venous blood samples after irradiation
For immediate centrifugation @ 2800 rpm:
☐ 2x for Citrate ☐ 2x EDTA ☐ 2x Li-Hep
For centrifugation after 30 min @ 2800 rpm: ☐ 2x Serum

Recovery: Monitor SpO2 and HR until awake
Pig awake and healthy: ☐ Yes ☐ No Time: _____

Comments: _____

PIG: Uniform

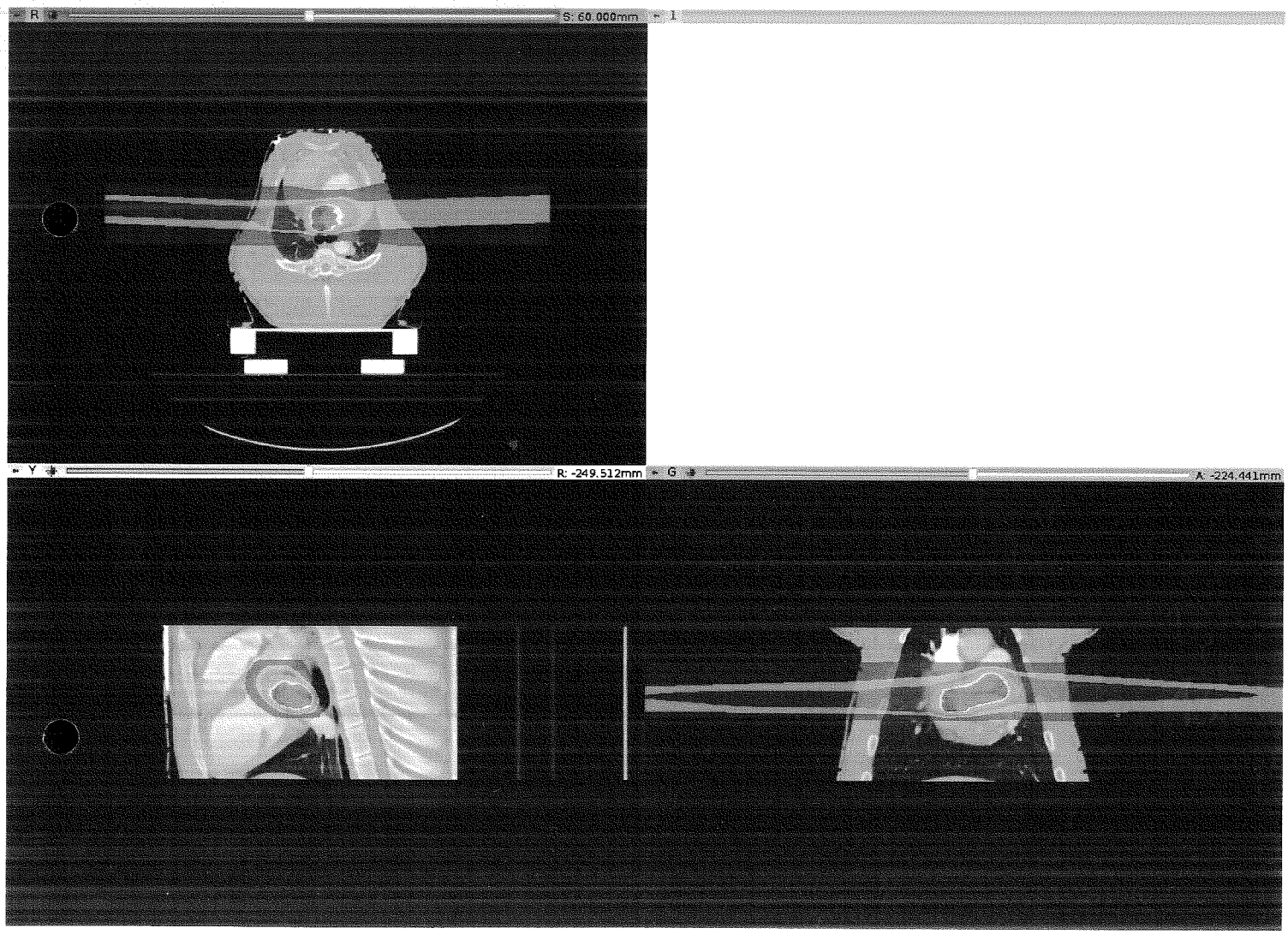
Important Treatment Planning Parameters:

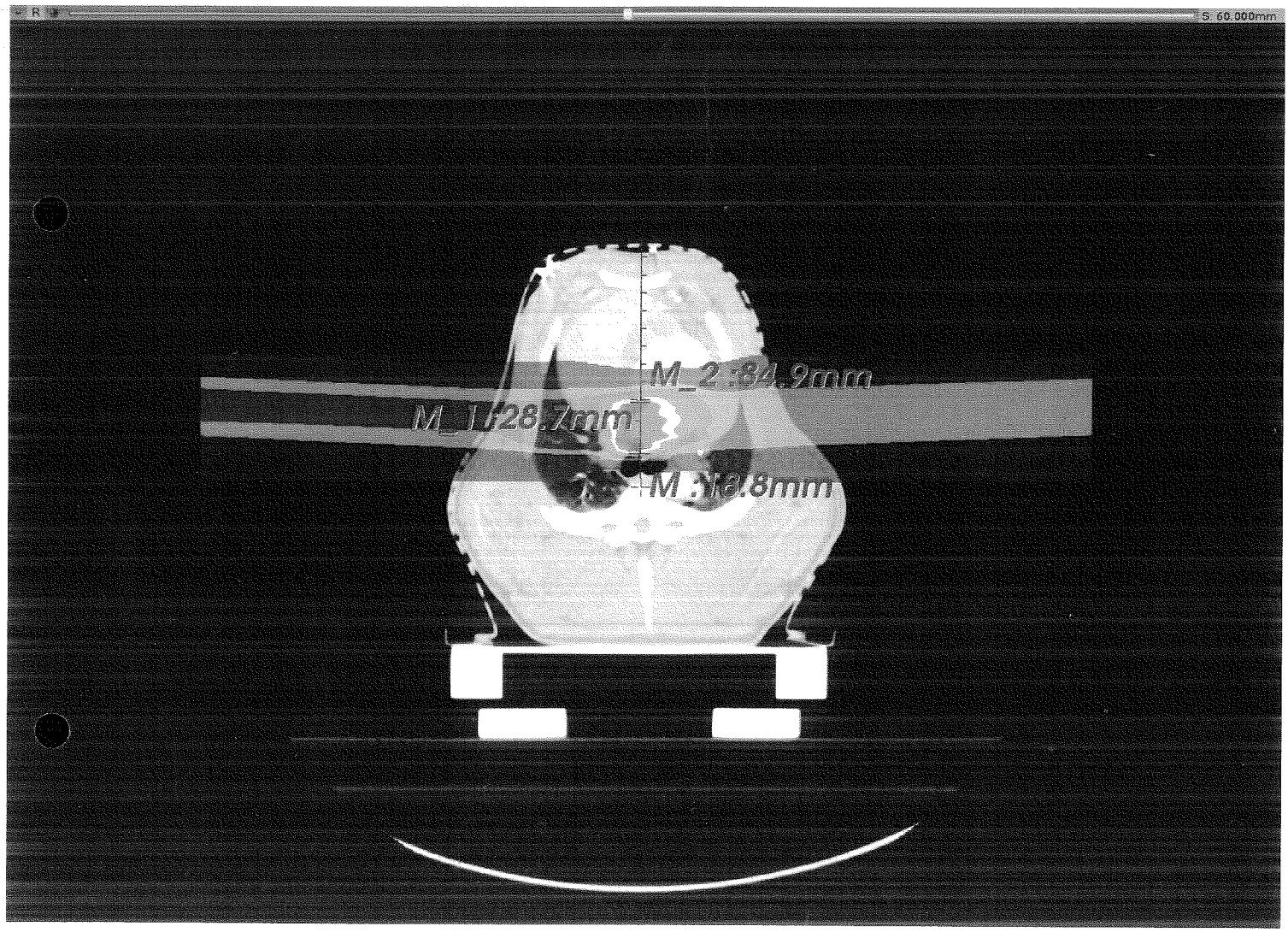
		CHECK
Dose:	40 Gy	
Target:	AblPV	
Isocenter AblPVMargin5mm:	256.0 217.0 71.0	
BB Center:	252.6 255.5 57.0	
Translation vector:	3.4 -38.5 -14.0	
Final Table Position:		
RST field 1:	**RESCANNING_Uniform_90.rst**	
Sam file produced?		
Angle:	90	✓
Number of EOPs:	19	✓
Minimal energy:	164.63	
Maximal energy:	237.05	
Total number of rasterpoints:	17824	✓
Rasterpoints first plane:	53	✓
Rasterpoints last plane:	2205	✓
RST field 2:	**RESCANNING_Uniform_270.rst**	
Sam file produced?		
Angle:	270	
Number of EOPs:	22	✓
Minimal energy:	143.79	
Maximal energy:	232.20	
Total number of rasterpoints:	17526	✓
Rasterpoints first plane:	42	✓
Rasterpoints last plane:	1590	✓

12:33 - 12:49
16:49 min

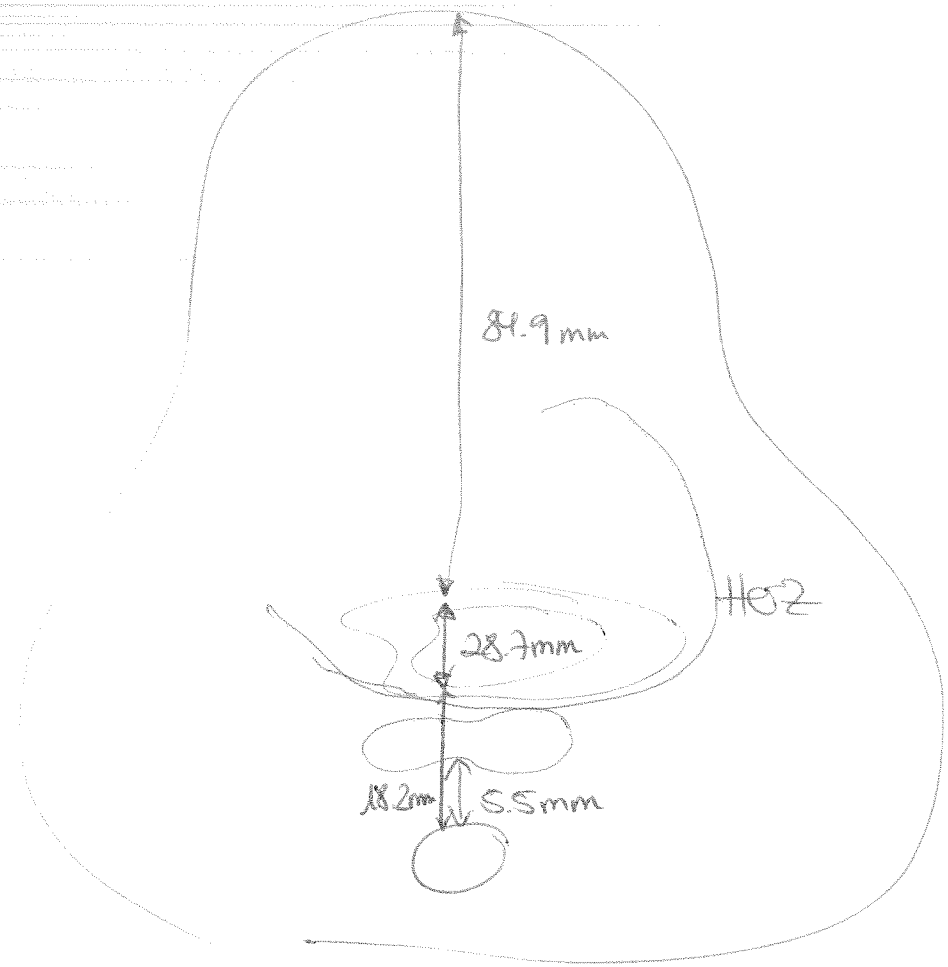
13:25 - 13:43
17:43 min

MPT: max 0.7 weight 0.9


R
S: 60.000mm
I
Y
R: -249.512mm
G
A: -224.441mm


R
S: 60.000mm
M_2 :84.9mm
M_1 :28.7mm

Uniform Abstände



- hinterkante HeS2 - Trachea Abstand

Positioning Documentation Pig Uniform

Immobilization: PiggyFix ☐ A ☐ B Mask left: 4-8 right: 4-8

☒ Match Tatoos, mask and laser, Beekleys in isocenter – *check images on page #2!*

☐ **patient couch zeroed** ☐ Translation to target: X 3.4 Y -38.5 Z -14.0

Comments: _____

_____

Respiration: ☒ 14 bpm, IPPV, V_t = 350, PEEP 0 ☐ other: _____

Vertical X-ray #1 Time (HH:MM) 11:43 breathhold: ____ secs

Exposure: 77 kV 50 mA 1000 ms

☒ Detector position ☒ Trigger cable set ☒ XIS external trigger

X-ray filename Uniform-Vertical 1 ☐ XIS – file closed

Lateral X-ray #1 Time (HH:MM) 11:40 breathhold: ____ secs

Exposure: 77 kV 50 mA 1000 ms

☒ Detector position ☒ Trigger cable set ☒ XIS external trigger

X-ray filename Uniform_Lateral 1 ☐ XIS – file closed

Vector: X 6.4 Y 7.1 Z 3.0 **Position:** X 9.8 Y -31.4 Z ~~-10.4~~ -10.4

Match on: ☐ bony anatomy ☐ markers ☐ pacemaker ☐ bony + heart

Repeat x-rays on separate page! Number of x-rays _____

Comments: _____

_____

_____

Final vertical X-ray Time (HH:MM) _____ breathhold: ____ secs

Exposure: ____kV ____ mA ____ ms

☐ Detector position ☐ Trigger cable set ☐ XIS external trigger

X-ray filename _____ ☐ XIS – file closed

Final lateral X-ray Time (HH:MM) _____ breathhold: ____ secs

Exposure: ____kV ____ mA ____ ms

☐ Detector position ☐ Trigger cable set ☐ XIS external trigger

X-ray filename _____ ☐ XIS – file closed

Position adjustment: X _____ Y _____ Z _____

Final position: X 9.8 Y -31.4 Z -10.4

☐ Pictures left/right ☐ X-rays back-up

Additional X-rays Pig Uniform

Vertical X-ray #2 Time (HH:MM) 11:53 breathhold: ____ secs

Exposure: 77 kV 50 mA 1000 ms

☒ Detector position ☒ Trigger cable set ☒ XIS external trigger

X-ray filename Uniform-Vertical2 ☐ XIS – file closed

Lateral X-ray #2 Time (HH:MM) 11:55 breathhold: ____ secs

Exposure: 77 kV 50 mA 1000 ms

☒ Detector position ☒ Trigger cable set ☒ XIS external trigger

X-ray filename Uniform-Lateral2 ☐ XIS – file closed

Vector: X 0 Y 0 Z −1 **Position:** X 98 Y ~~0~~ −3.14 Z −11.4

Vertical X-ray #3 Time (HH:MM) 12:16 breathhold: ____ secs

Exposure: 77 kV 50 mA 1000 ms

☒ Detector position ☒ Trigger cable set ☒ XIS external trigger

X-ray filename Uniform-Vertical3 ☐ XIS – file closed

Lateral X-ray #3 Time (HH:MM) 12:13 breathhold: ____ secs

Exposure: 77 kV 50 mA 1000 ms

☒ Detector position ☒ Trigger cable set ☒ XIS external trigger

X-ray filename Uniform-Lateral3 ☐ XIS – file closed

Vector: X ____ Y ____ Z ____ **Position:** X ____ Y ____ Z ____

Vertical X-ray #4 Time (HH:MM) ____ breathhold: ____ secs

Exposure: ____ kV ____ mA ____ ms

☐ Detector position ☐ Trigger cable set ☐ XIS external trigger

X-ray filename ____ ☐ XIS – file closed

Lateral X-ray #4 Time (HH:MM) ____ breathhold: ____ secs

Exposure: ____ kV ____ mA ____ ms

☐ Detector position ☐ Trigger cable set ☐ XIS external trigger

X-ray filename ____ ☐ XIS – file closed

Vector: X ____ Y ____ Z ____ **Position:** X ____ Y ____ Z ____

Pig Uniform Date: 24. Juli 2014

Start Field 1: _____ End Field 1: _____

Respirator Log: respiratar_log-2014_07_24_12_28_28.txt

Beckhoff Log: Uniform_90.srd

Bemerkungen: sehr lange Breathholds
ein paar "Miniatmer", PET-Messung nach
der Bestrahlung

Start Field 2: _____ End Field 2: _____

Respirator Log: respiratar_log_2014_07_24_13_25_23.txt

Beckhoff Log: Uniform_270.srd

Bemerkungen: anders als sonst ein paar Mal
während des Spellgate zwischen Respigate ON/OFF
geschaltet

Checkliste Bestrahlungsplannung

DOSE: 4Gy **TARGET:** PV **SCHWEIN:** Uniform

Scripts path: AIXd/user/motion/Beamtime/GSI1407/Simulations/SCRIPTS

Heartbeats during CT: N:45 C:53 **bpm** **Finalmotion:** sin_3mm_1200ms0

Task	Script	Done?	Name	Date
Create Header		✓	AE	17.07.
Copy CT data to PatientData2		✓	AE	17.07.
Sort CTs (contrast/native)		✓	AE	"
Sort motion phased		✓	AE	"
Check # of files in each phase	CTX.sh	✓	AE	"
Check contrast and native slices	"	✓	AE	"
Create CTX	"	✓	AE	"
Create MHA	"	✓	AE	"
Check BB coordinates and write Header		✓	AE	"
Copy Contours		✓	AE	18.07.
Create VDX		✓	AE	"
Change 0 to 1 for Target (VDX)		✓	AE	"
Check voi names in VDX		✓	AE	"
FalseColorCheck contrast<->native (00)		✓	AE	17.07.
Contours native ok?				
Registration contrast -> 4DCT		✓	AE	17.07.
Registration ok?		✓	AE	17.07.
CTV - add Margins	Pig_DATA.sh	✓	AE	18.07.
CTV - calculate Isocenter	"	✓	"	18.07.
ITV - created	"	✓	"	18.07.
ITV - calculate Isocenter	"	✓	"	18.07
For Abl_LV Target: Create Skin Kontour	"			
Static treatment planning	Pig_PLAN.sh			
Water plan	"			
Rescanning treatment plannint	"			
GD Plots	Pig_DOSECUTS.sh			
DVHs Target + OAR	Pig_ANALYSE.sh			
Max-Mean Dose Plots	"			
Dose Volume Plots	"			
Schweinchenzettel	Pig_FINAL.sh			
Copy of dose+rst+gd in results dir	"			
Create MIP and MEAN	Pig_MIP_MEAN.sh	✓	AC	19.07
angle changed from 270° to -90°?				
Check BB Isocenter in DY				
OVERALL APPROVAL				

Study Documentation Pig Uniform

Study group: ☐ AV ☒ PV ☐ LV Dose 40 Gy

Surgery: Date (DD.MM.YYYY): _____ Duration ____ h

Procedures ☐ Pacemaker ☐ Clips

Mapping: ☐ LV ☐ RA ☐ LA

Comments: _____

_____

Follow-up #1: Date (DD.MM.YYYY): _____ Duration ____ h

Comments: _____

_____

_____

Follow-up #2: Date (DD.MM.YYYY): _____ Duration ____ h

Comments: _____

_____

_____

CT: Date (DD.MM.YYYY): 16.07.14 Duration ____ h

Scans: ☒ BPL-CT ☐ 4D-CT ☐ 4D-CT with CA

HIT patient name: Schwein - 20140716, Uniform

Comments: 38.5 kg

_____

Treatment planning:

RST filename: _____

Comments: _____

_____

Verification: Date: _____ Time (HH:MM) _____

Dose files: 3D: _____ 4D: _____

Comments: _____

_____

Irradiation: Date: _____ Time (HH:MM) _____ Duration ____ h

SAM filename: _____

Lmdout filename: _____

Comments: _____

_____

CT Documentation Pig Uniform

Premedication: Ketamin [mg] 150 Azaperon [mg] 200

Medication: Propofol [ml/KG/min] 0.18 Dormicum [mg] 15

Propofol [ml] 180.6

Other: _____

CT: Date (DD.MM.YYYY): 16.07.14 Duration _____ h 18:15 – 19:16

HIT patient name: Schwein – 20140716, Uniform ☒ table height 230

Immobilization: (use room laser on mask) PiggyFix [A/B] A

Mask Index left: 4–8 right: 4–8

Edding: ☒ Laser ☒ ECG lines ☒ Beekleys on laser intersections ☒ Pig name

Tattoos: ☒ Laser / mask intersection ☒ mask borders ☒ edge of piggyfix

Pictures: ☒ left ☒ right ☐ transfer for positioning

Comments: _____

_____

Table position zeroed with CT-laser on 1st frame ☒ other: _____

Respiration: ☒ 14 bpm, IPPV, V_t = 350, PEEP 0

☐ other: _____

Breath-hold test before 4DCTs ☒ Native ☐ Contrast

Native 4D-CT Time (HH:MM) 19:06 breathhold: 35 secs

slices: 1331 $CTDI_{vol}$ 63.39 DLP 820.3 Heart rate [bpm]: 46

Contrast agent: ☒ air-free Dose: ☒ 50 ml ☐ other: _____

Contrast 4D-CT: Time (HH:MM) 19:08 breathhold: 42 secs

slices: 1331 $CTDI_{vol}$ 63.39 DLP 820.0 Heart rate [bpm]: 50

Delay after CA: ☒ 10 sec ☐ other: _____

Deviations from protocol "Schwein_GSI": ☐ No ☐ Yes (details in comments!)

Comments: 195 mAs (native + contrast)

_____

4D-CT Check by _____ ☐ Native ☐ Contrast

Contours by _____ Date (DD.MM.YYYY): _____

Data Transfer to GSI:

☐ 4D-CT ☐ CA-4D-CT Date (DD.MM.YYYY): _____

☐ Contours Date (DD.MM.YYYY): _____