



Kurznasige Hunde aus onkologischer Sicht

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Literatursuche: “brachycephaly & cancer” (I)

Leptomeningeal gliomatosis: 90% brachycephalic (n=14)

Glioma

Heart base tumors (43%)

Brachycephalic breeds overrepresented with pituitary macroadenoma or craniopharyngeal duct cysts (n.s., p=.076).

Mast cell tumors: Boxers (OR 7.2), American Pit Bull Terriers (OR 5.4), French Bulldogs (OR 4.4) and Labrador Retrievers (OR 2.6) were overrepresented.

[Primary and secondary leptomeningeal gliomatosis in dogs.](#)

Rissi DR, Reyes VAA, Donovan TA, Church ME, Howerth EW, Klang A, Woolard KD, Miller AD. *Vet Pathol.* 2023 Aug 14;3009858231193104

[Retrospective evaluation of canine heart base tumours treated with toceranib phosphate \(Palladia\): 2011-2018.](#)

Lew FH, McQuown B, Borrego J, Cunningham S, Burgess KE. *Vet Comp Oncol.* 2019 Dec;17(4):465-471.

[Histopathologic Findings in Canine Pituitary Glands.](#)

Miller MA, Bruyette DS, Scott-Moncrieff JC, Owen TJ, Ramos-Vara JA, Weng HY, Vanderpool AL, Chen AV, Martin LG, DuSold DM, Jahan S. *Vet Pathol.* 2018

[Epidemiology of Breed-Related Mast Cell Tumour Occurrence and Prognostic Significance of Clinical Features in a Defined Population of Dogs in West-Central Italy.](#)

Pierini A, Lubas G, Gori E, Binanti D, Millanta F, Marchetti V. *Vet Sci.* 2019 Jun 6;6(2):53. doi: 10.3390/vetsci6020053.



Literatursuche: “brachycephaly & cancer” (II)

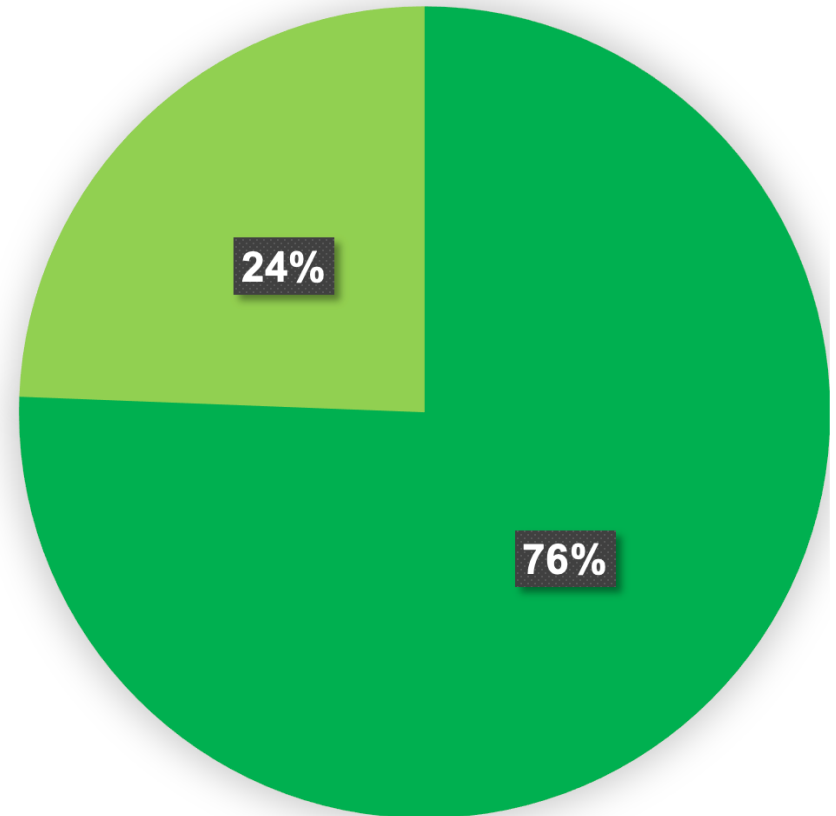
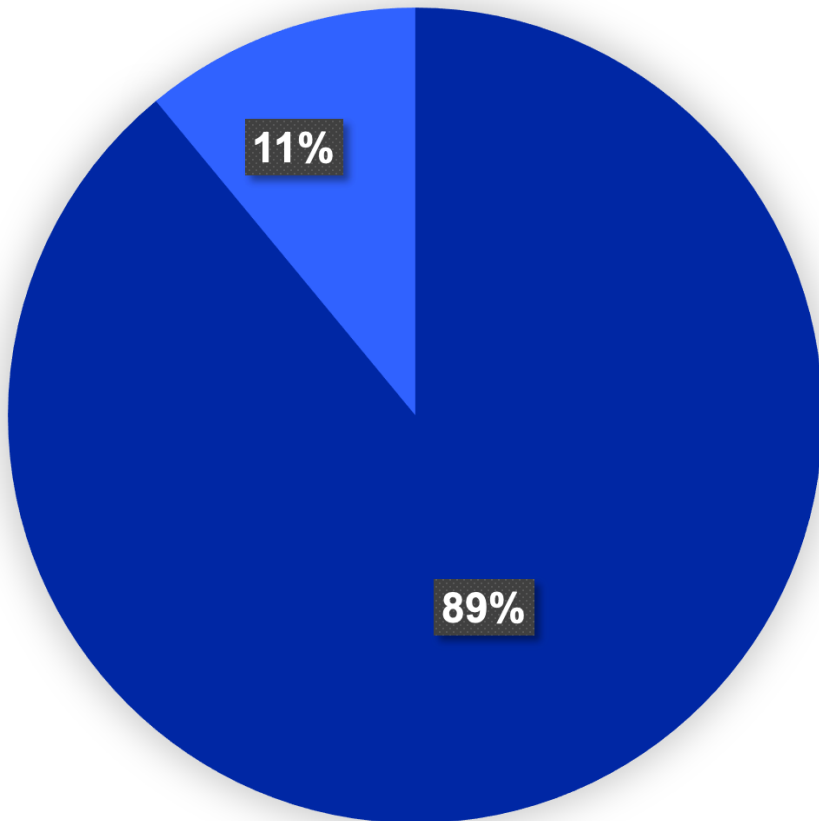
Osteosarcoma: brachycephalic skull conformation showed reduced odds (OR 0.50, 95% CI 0.32-0.80).

905'552 study dogs, 331 OSA

Frontal sinus carcinoma: brachycephalics accounted for 8.8%.

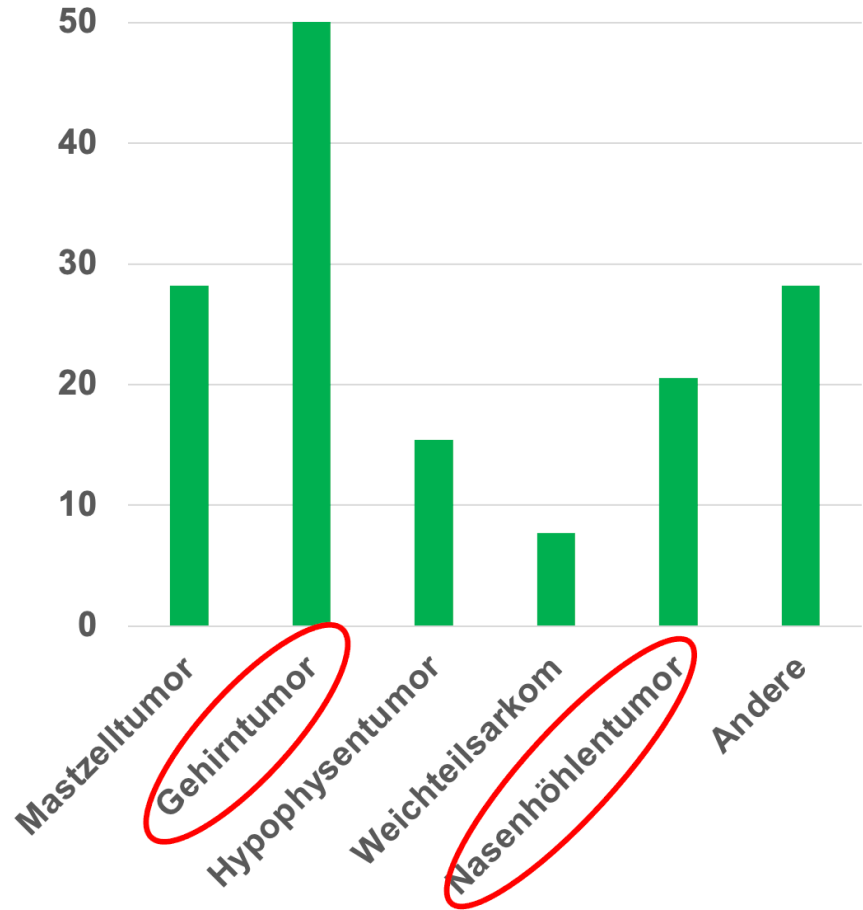
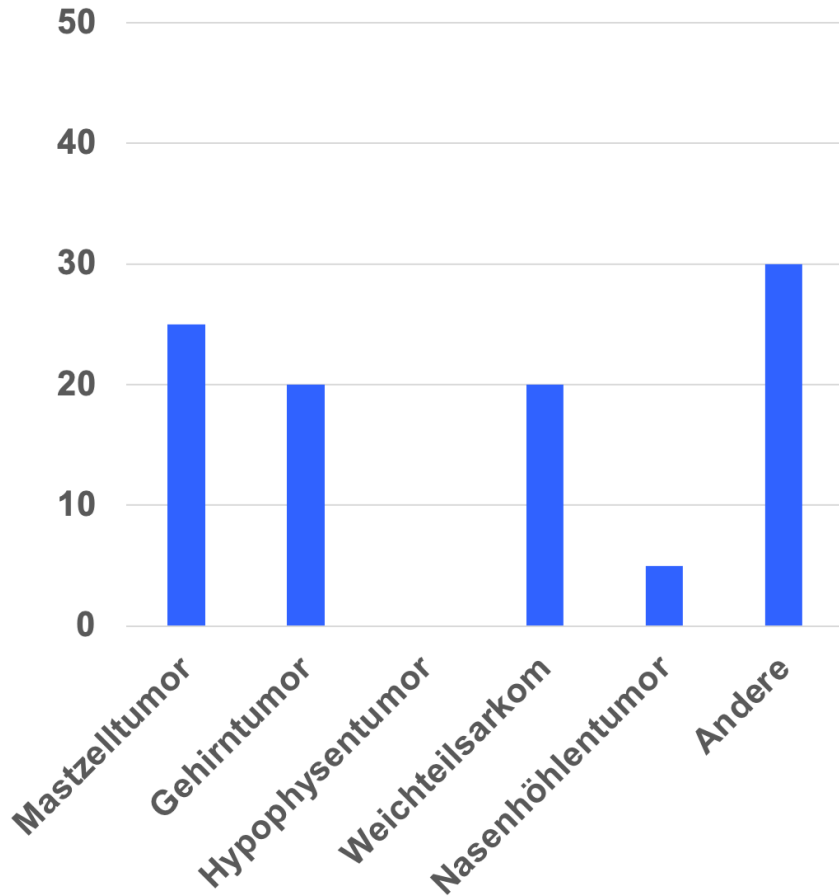


Brachyzephele Onko Tierspital Zürich 2013 => 2022





%-Anteil brachyzephaler Rassen: Tumortypen





1) Mastzelltumoren

Mops: erhöhte Anzahl Mastzelltumoren (OR: 2.28, 95%CI: 1.81–2.86)

56% multiple Tumoren (multiple primaries)

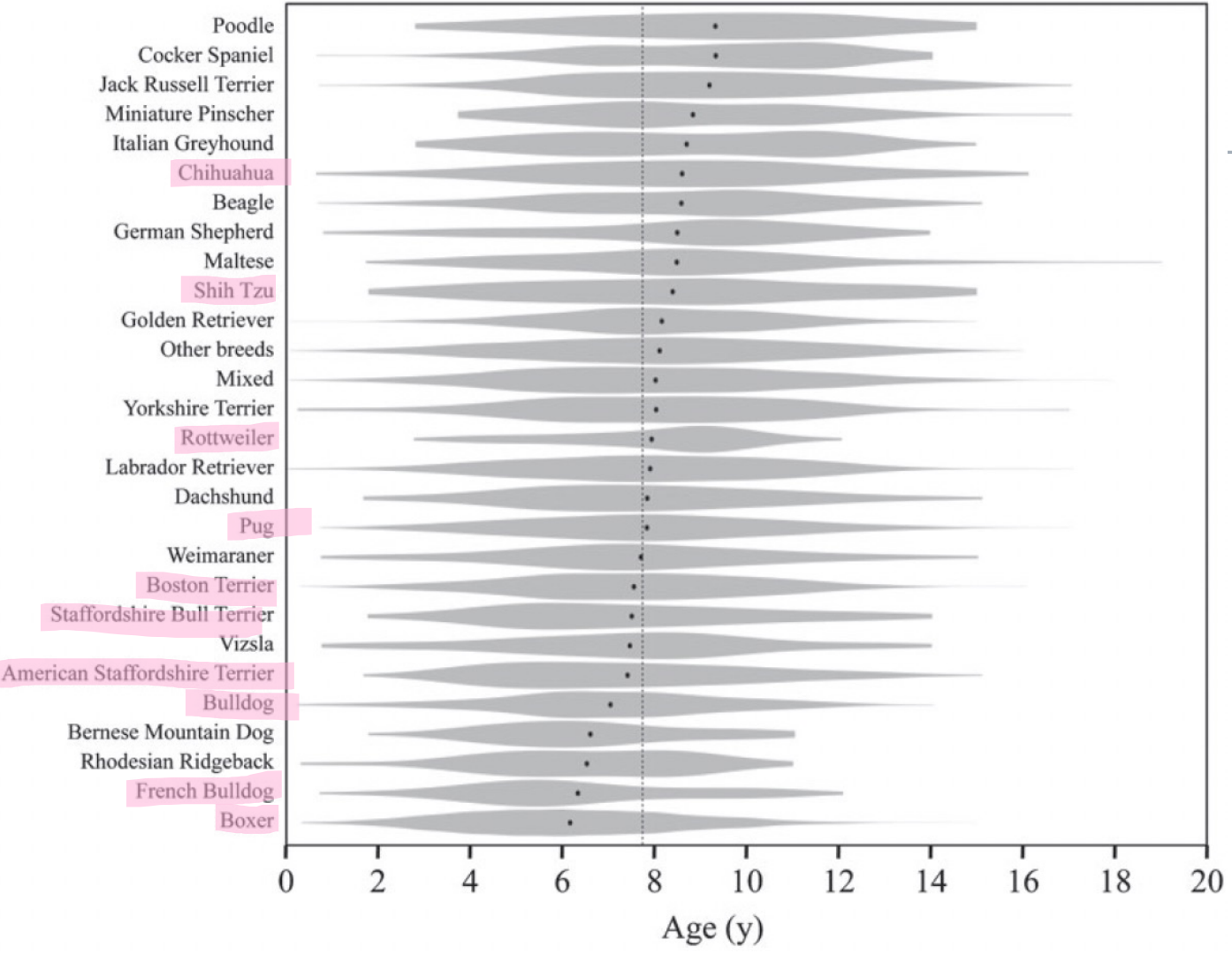
94% low- intermediate Grad

=> Mops & Boxer häufiger, aber weniger aggressive

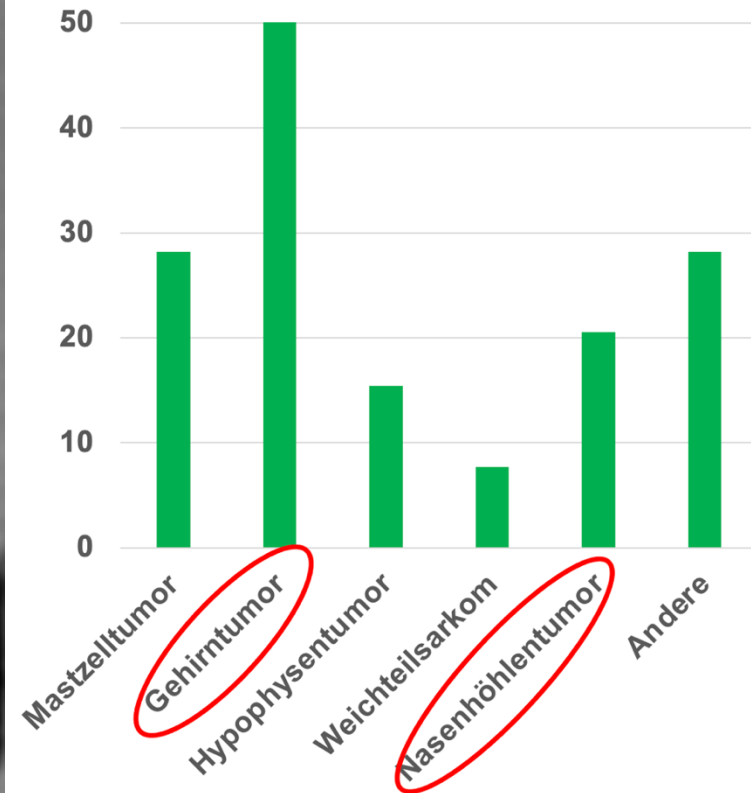
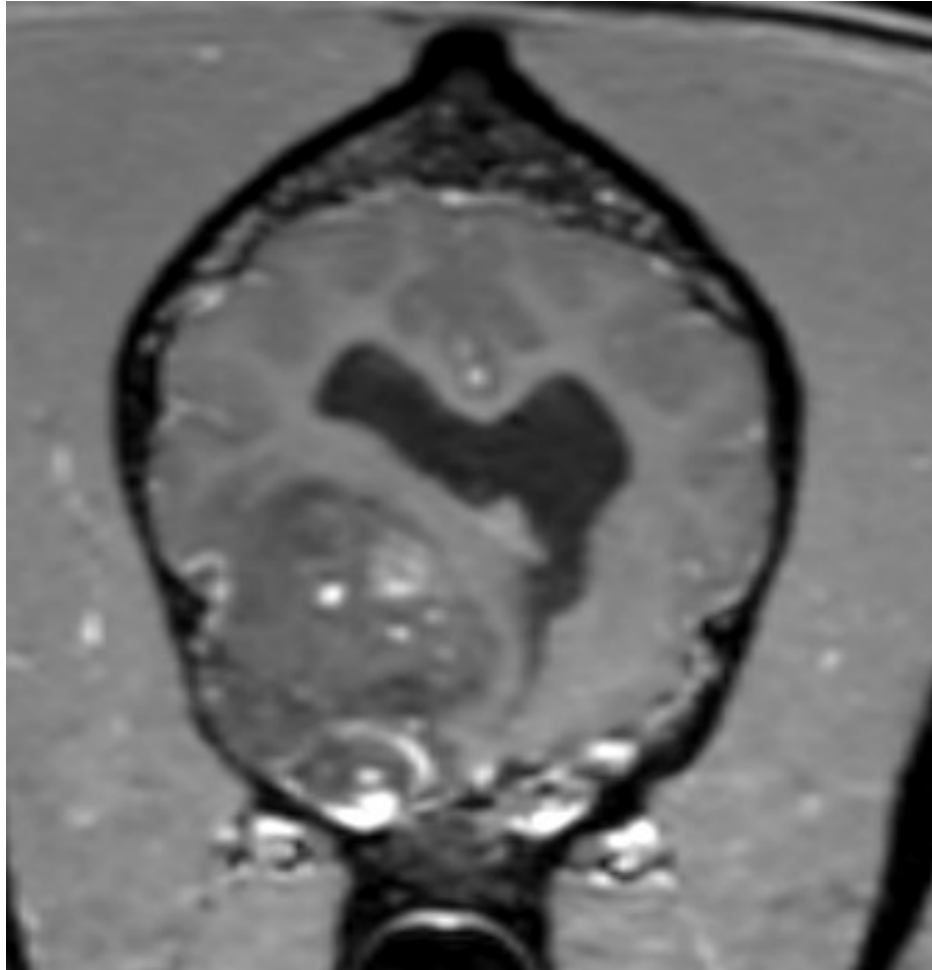
Rassen mit Bulldog Herkunft

Eher bei jüngeren Tieren

ACHTUNG: Rottweiler und Shar-Pei: 2x häufiger high-grade Tumoren



2) Gehirntumoren





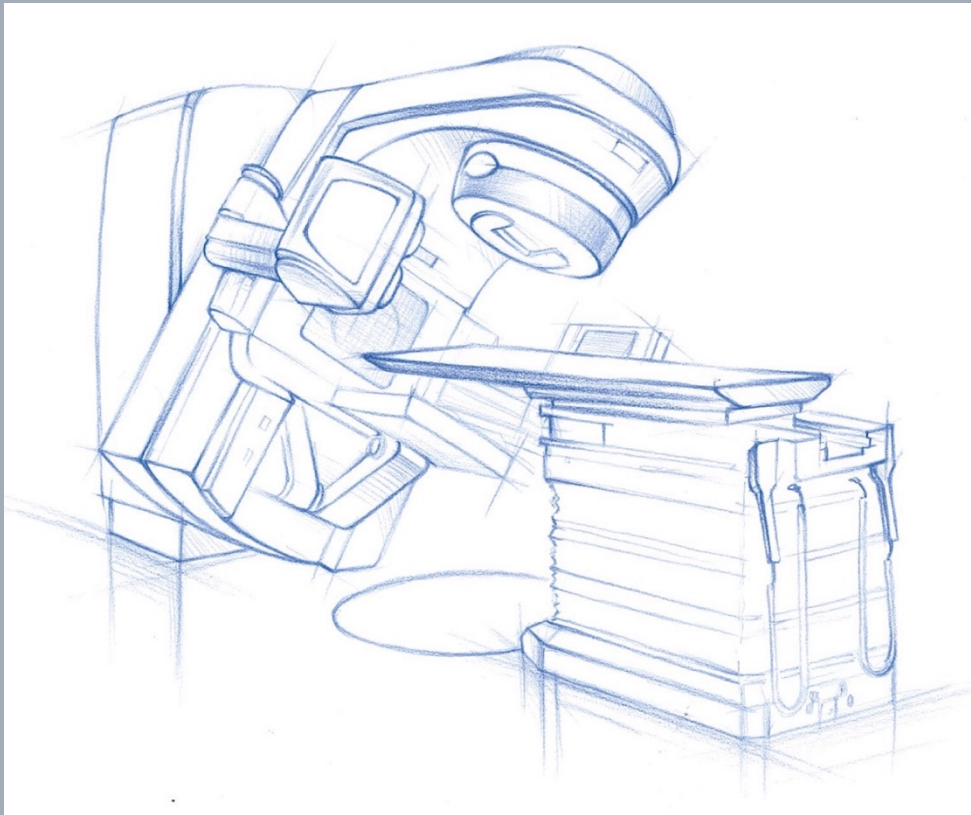
Gliale Tumoren: 73% brachycephale Rassen

Table 1. Signalment, final diagnosis, and overall survival in 33 dogs with intracranial glial tumors.

Number	Breed	BW at Surgery (kg)	Age at Surgery (years)	Sex	Diagnosis ^a	Biopsy Grade	Whole Tumor Grade
1	Boston Terrier	8	11	M/C	Oligodendroglioma	High	High
2	Shih Tzu	8	11	F/S	Oligodendroglioma	High	High
3	Staffordshire Terrier	26	1	FI	Undefined glioma	High	High
4	Labrador Retriever	39	7	M/C	Undefined glioma	High	N/A
5	Bull Mastiff	43	7	F/S	Oligodendroglioma	High	N/A
6	Boxer	40	6	M/C	Undefined glioma	High	High
7	Boston Terrier	11	6	F/S	Oligodendroglioma	High	High
8	Boxer	29	6	M/C	Undefined glioma	High	High
9	Boxer	25	7	M/C	Oligodendroglioma	High	N/A
10	Boxer	18	9	F/S	Oligodendroglioma	High	High
11	Boston Terrier	15	10	M/C	Oligodendroglioma	High	N/A
12	Airedale	31	8	M/C	Undefined glioma	Low	High
13	Boxer	40	7	M/C	Oligodendroglioma	High	High
14	Staffordshire Terrier	18	9	M/C	Undefined glioma	High	High
15	American Bulldog	36	5	M/C	Oligodendroglioma	High	High
16	Staffordshire Terrier	20	6	MI	Oligodendroglioma	High	High
17	Staffordshire Terrier	50	7	M/C	Oligodendroglioma	High	High
18	Wheaten Terrier	20	10	F/S	Astrocytoma	High	High
19	Dogue de Bordeaux	75	4	M/C	Oligodendroglioma	High	N/A
20	Boxer	39	5	M/C	Oligodendroglioma	High	N/A
21	English Bulldog	24	10	F/S	Oligodendroglioma	High	N/A
22	Boston Terrier	11	5	F/S	Oligodendroglioma	High	High
23	Boxer	29	6	F/S	Oligodendroglioma	High	N/A
24	Boxer	40	8	M/C	Oligodendroglioma	High	N/A
25	English Bulldog	20	9	F/I	Oligodendroglioma	Low	High
26	English Springer Spaniel	18	7	M/C	Undefined glioma	High	High
27	Boxer	26	9	F/S	Oligodendroglioma	High	N/A
28	German Shepherd Cross	20	11	M/I	Astrocytoma	Low	Low
29	Golden Retriever	19	1	F/S	Astrocytoma	Low	Low
30	Mixed Breed	24	14	M/C	Astrocytoma	Low	N/A
31	Golden Retriever	27	12	F/S	Astrocytoma	Low	Low
32	Pembroke Corgi	13	9	F/S	Astrocytoma	Low	Low
33	American Bulldog	25	11	F/S	Astrocytoma	Low	N/A



Team: Neurologie / Radio-Onkologie / (Bildgebung)

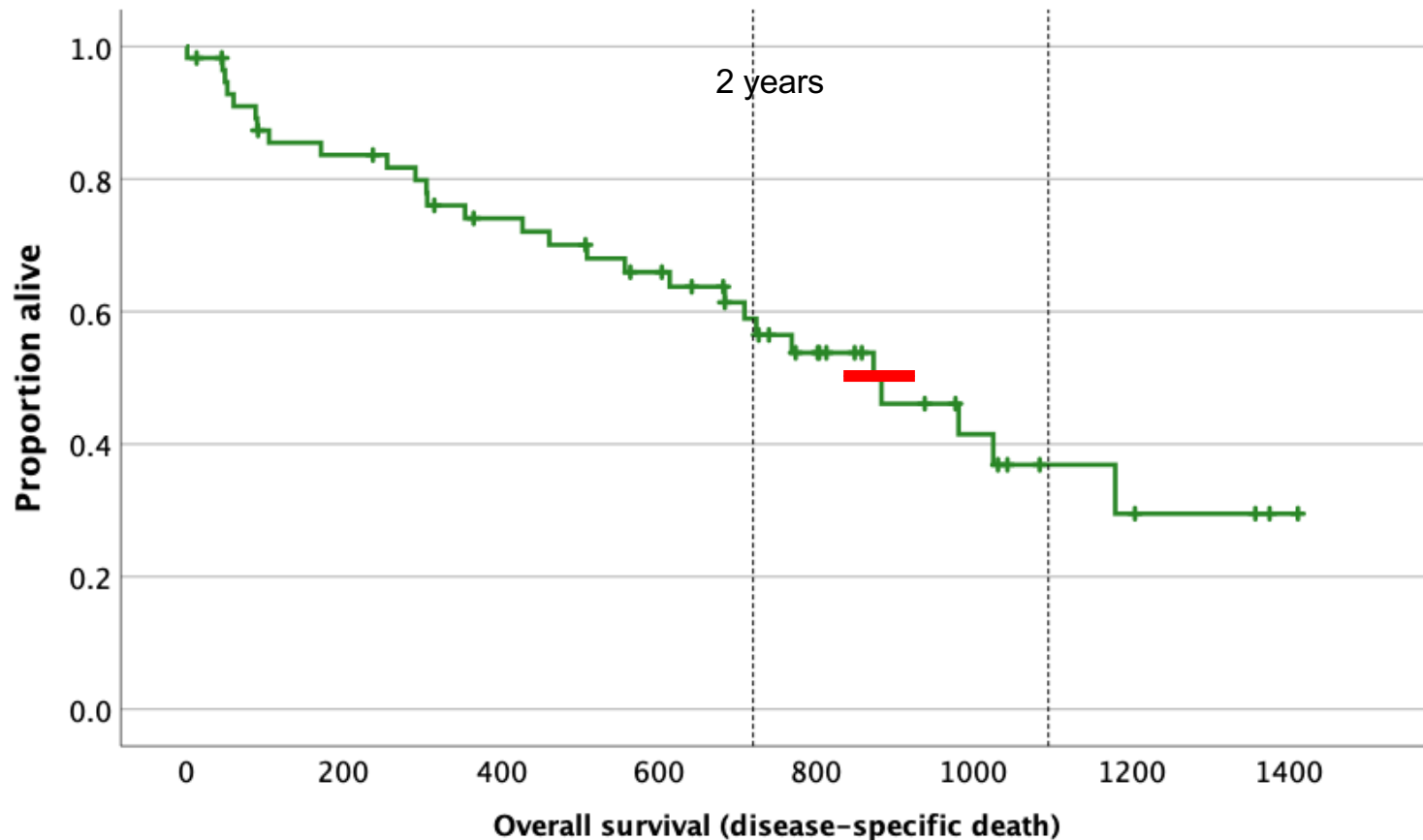


- 4 diplomierte Radio-Onkolog:innen
- 3 (quasi 4) diplomierte Neurolog:innen
- ~1500 Bestrahlungen / Jahr
- 1/3 intrakranielle Tumoren

- => 10 Bestrahlungen / 2 Wochen



Mediane tumorspezifische Überlebenszeit: 873 days (95%CI: 614;1133)





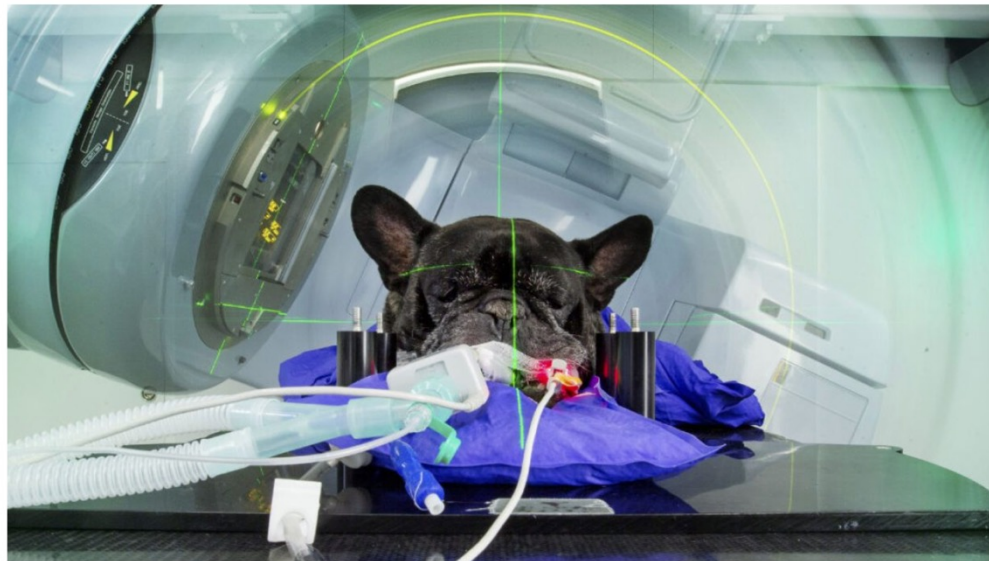
**Universität
Zürich** UZH

Radio-Onkologie

1. Gesetz der Magie bei Gehirntumoren: rasch handeln, hohe Präzision und hohe Dosen

Klinische Studie zur Strahlen- und Chemotherapie

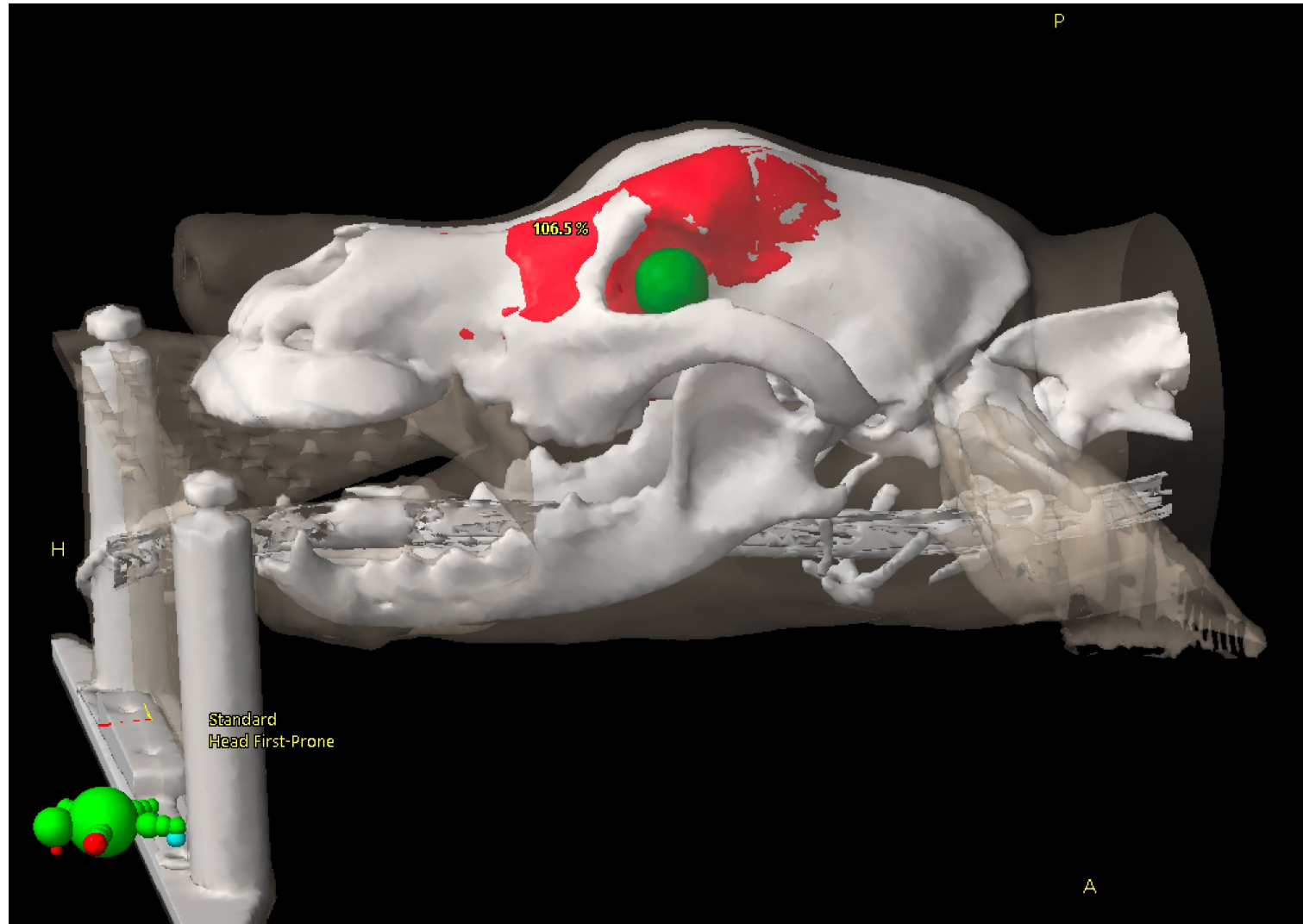
Placebokontrollierte Studie zur Therapie aggressiver Gliome beim Hund

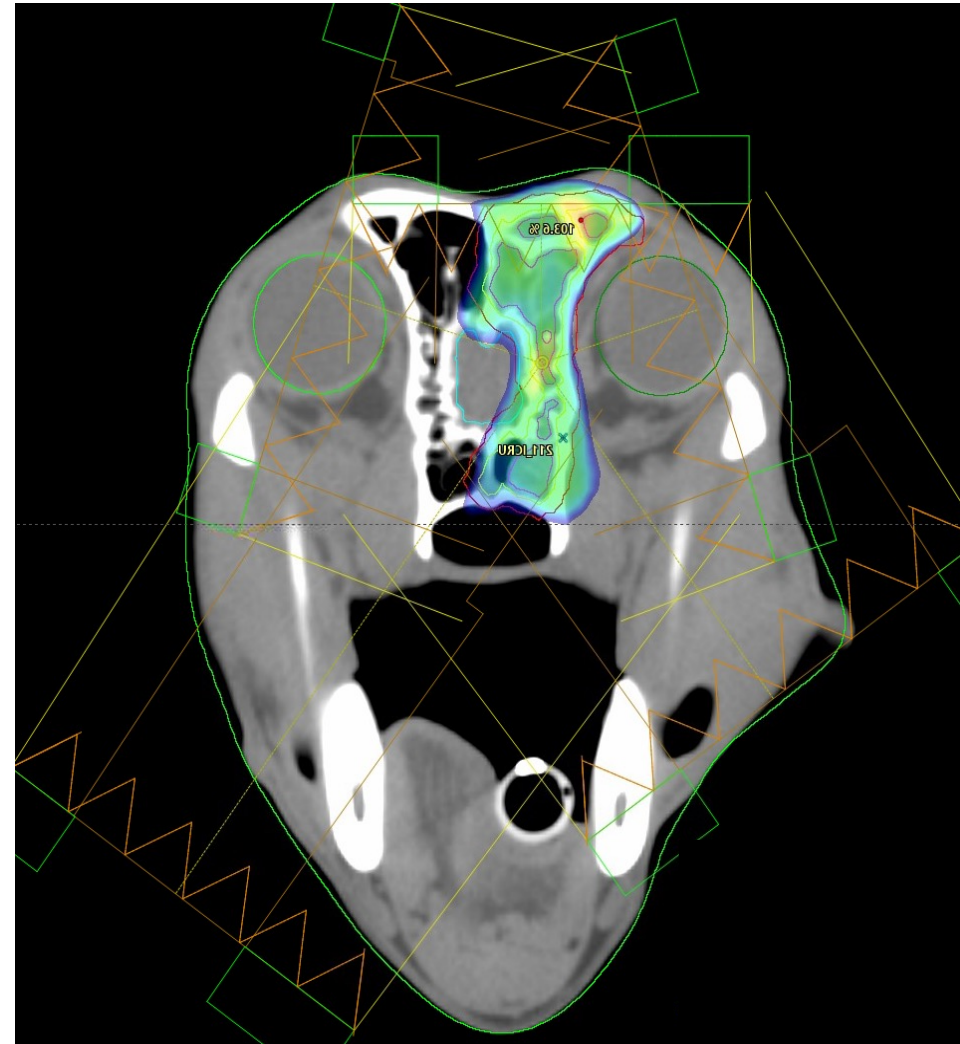
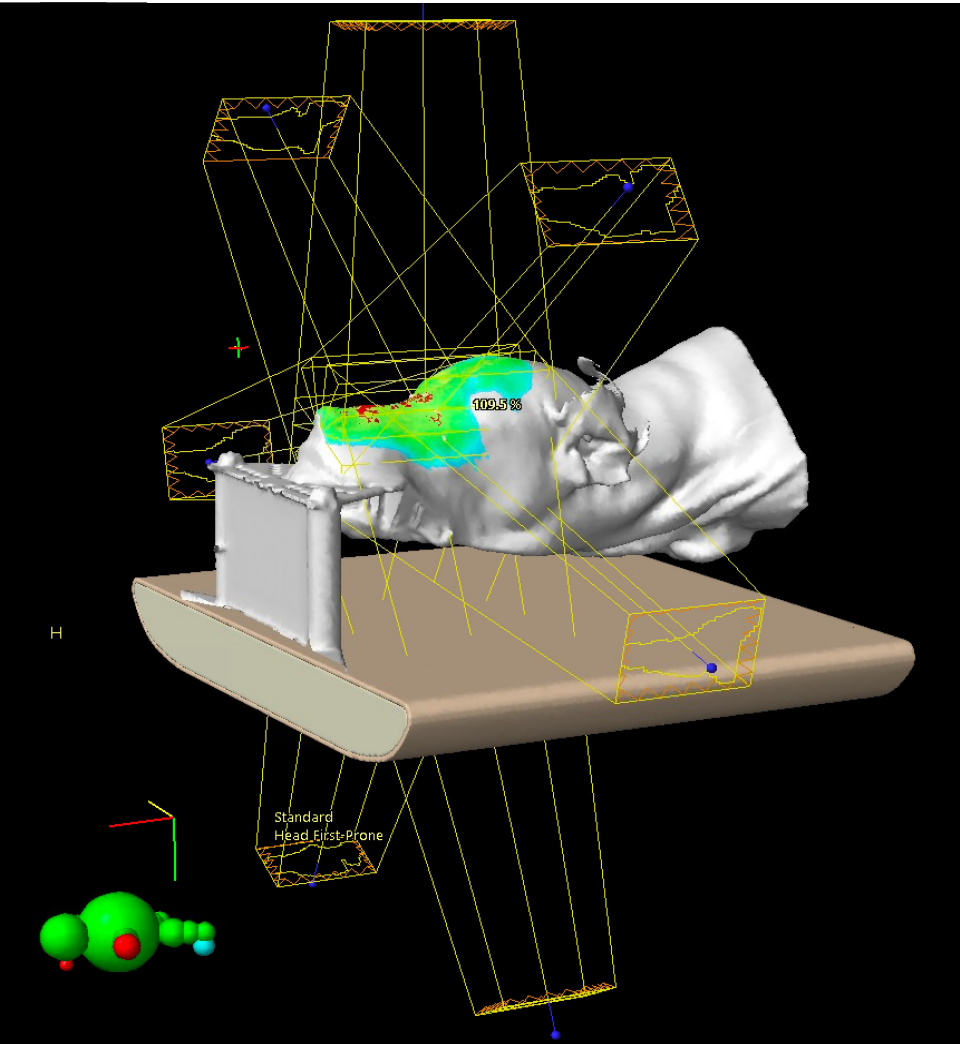


Patient mit Hirntumor während der Strahlentherapie

<https://www.tierspital.uzh.ch/kleintierkliniken/studie-strahlen-chemotherapie/>

3) Nasenhöhlentumoren (??!)





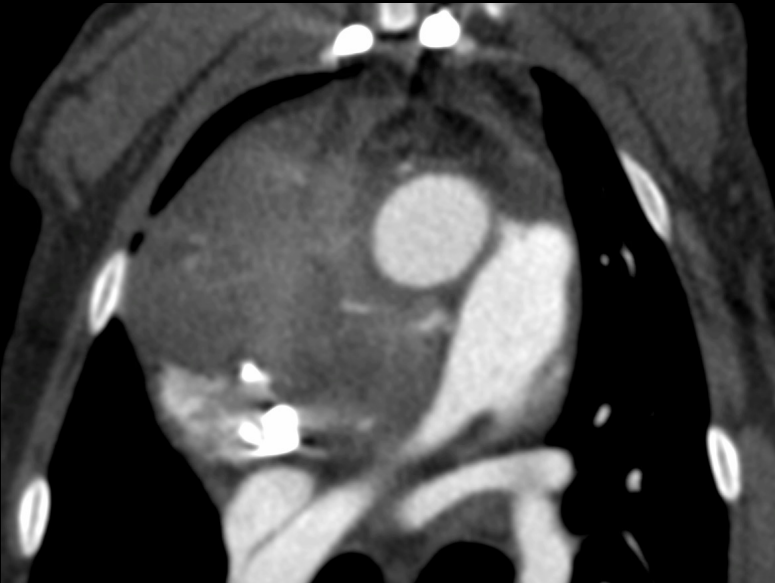
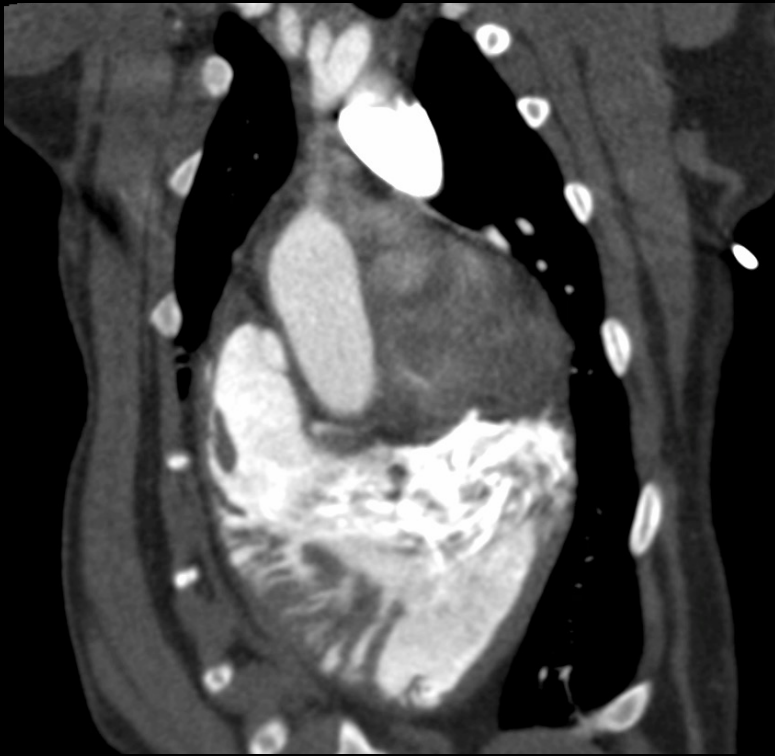


Was kann der neue Linac besser? **HDMLC**



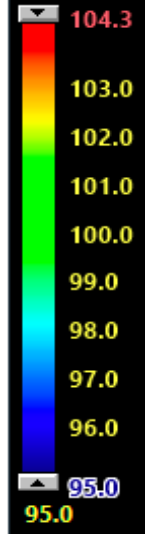


4) Herzbasistumoren (Chemodektome)



Dose Color Wash [%]

104.3

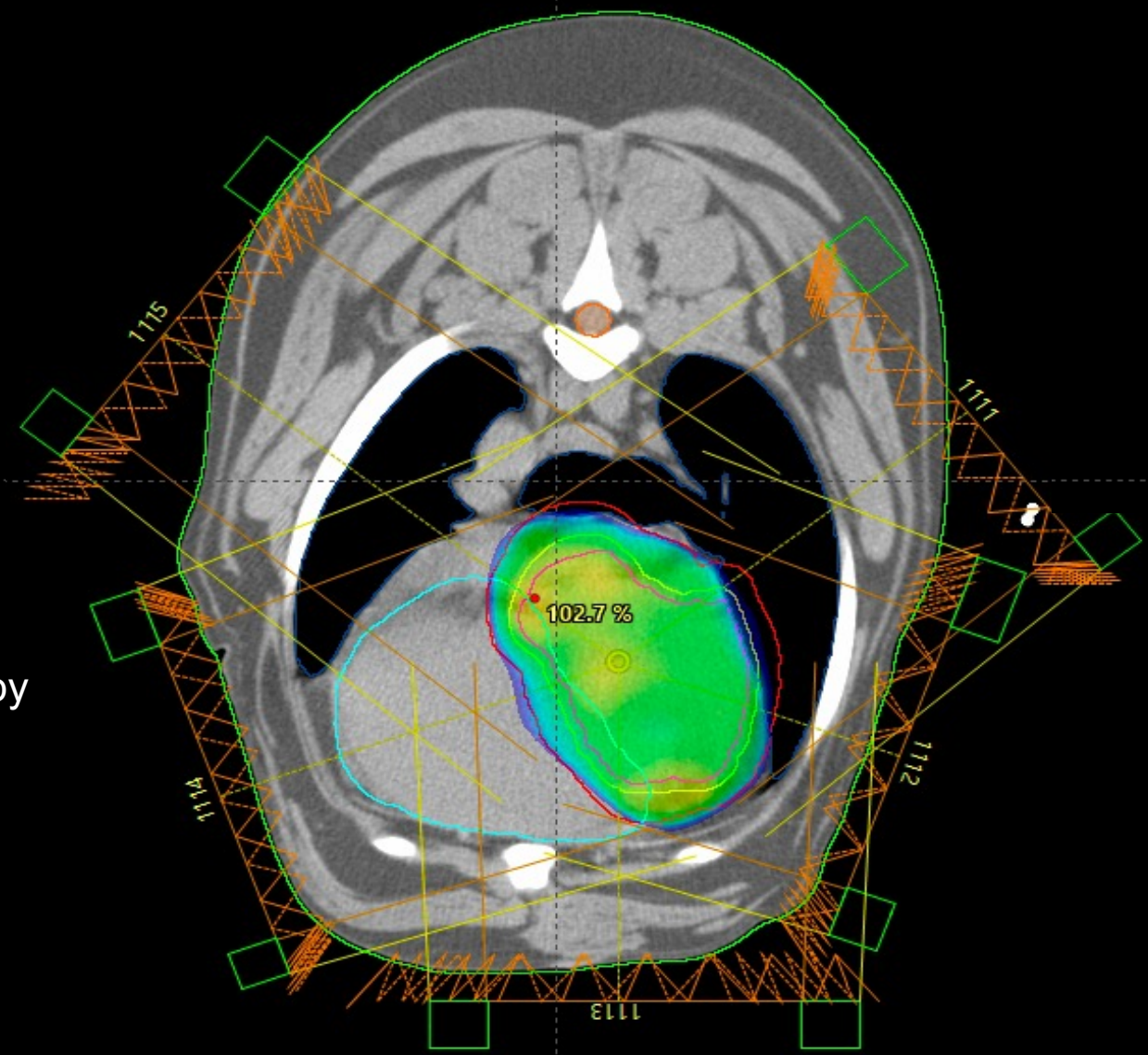


120 kV

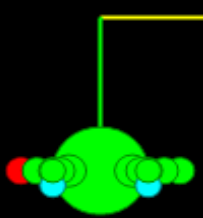


3D Dose MAX: 104.3 %
3D MAX for 11_PTV: 104.3 %
3D MIN for 11_PTV: 81.5 %
3D MEAN for 11_PTV: 100.0 %

Treatment:
Curative radiation therapy
10 x 4 Gy



Standard



Head First-Prone
Z: -41.00 cm





Universität
Zürich^{UZH}

Radio-Onkologie

Onkologische Behandlung von Brachyzephalen

***I HAVE A PROBLEM FOR EVERY
SOLUTION***



**Universität
Zürich** UZH

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