

Supplemental Table 1: Overview about the epidemiologic data, results of neurologic examination, measurements of brain- and ventricular volume as well as ventricular reduction before surgery 3 months after ventriculo-peritoneal shunting

	Breed, gender, age	MRI findings	Neurologic signs before surgery	Duration of signs (weeks)	Volumes before surgery (cm ³)	Volumes after surgery (cm ³)	Reduction of ventricular volume	Neurologic signs after surgery
1	Chihuahua, male, 12 weeks	Biventricular hydrocephalus, supracollicular fluid accumulation	Obtundation, ataxia of all four limbs, reduced menace response	8	Ventricle: 20.4 Brain: 79 V/B index: 0.25	Ventricle: 4.6 Brain: 93 V/B index: 0.04	77.5%	none
2	Boston terrier, male, 22 weeks	Tetraventricular hydrocephalus, moderate syringomyelia	Obtundation, ataxia of all four limbs, circling, aimless barking	4	Ventricle: 26 Brain: 86 V/B index: 0.3	Ventricle: 6.7 Brain: 105 V/B index: 0.06	74.3%	none
3	Jack Russel terrier, female, 18 weeks	Biventricular hydrocephalus	Central blindness, ataxia of all four limbs	4	Ventricle: 21 Brain: 65 V/B index: 0.32	Ventricle: 21 Brain: 65 V/B index: 0.32	0	Central blindness, ataxia of all four limbs
4	Chihuahua, female, 41 weeks	Tetraventricular hydrocephalus	Obtundation, hypermetric ataxia of all four limbs, central blindness	12	Ventricle: 24.9 Brain: 64.8 V/B index: 0.38	Ventricle: 12.8 Brain: 76.4 V/B index: 0.16	48.6%	Obtundation, hypermetric ataxia of all four limbs, central blindness
5	Mixed breed, female, 26 weeks	Biventricular hydrocephalus	Obtundation, ataxia of all four limbs, hypermetric gait	8	Ventricle: 18.9 Brain: 57.2 V/B index: 0.33	Ventricle: 11.2 Brain: 64.9 V/B index: 0.17	40.8%	none
6	Dachshund, female, 6 years	Biventricular hydrocephalus	Obtundation	12	Ventricle: 19.6 Brain: 58.4 V/B index: 0.33	Ventricle: 6.4 Brain: 71.6 V/B index: 0.08	67.3%	none
7	French bulldog, male, 3 years	Tetraventricular hydrocephalus, moderate syringomyelia	Obtundation, incontinence, intermittent head tilt	48	Ventricle: 13.2 Brain: 67 V/B index: 0.19	Ventricle: 6.2 Brain: 75 V/B index: 0.08	53.1%	none
8	Australian shepherd, male, 16 weeks	Biventricular hydrocephalus	Obtundation, nystagmus, ataxia of all four limbs	8	Ventricle: 23 Brain: 38 V/B index: 0.6	Ventricle: 28 Brain: 43 V/B index: 0.52	21.8%	none
9	Mini bullterrier, neutered female, 2.5 years	Biventricular hydrocephalus	Obtundation	8	Ventricle: 26.8 Brain: 88.2 V/B index: 0.3	Ventricle: 6.9 Brain: 108.1 V/B index: 0.06	74.3%	none
10	Chihuahua, male, 12 months	Tetraventricular hydrocephalus	Aimless barking, circling, head tilt	12	Ventricle: 16.4 Brain: 56.3	Ventricle: 8.3 Brain: 64.8	49.9%	none

					V/B index: 0.28	V/B index: 0.12		
11	Labrador, neutered male, 2 years	Triventricular hydrocephalus	Obtundation, ataxia of all four limbs, ventrolateral strabism	2 days	Ventricle: 28.6 Brain: 86 V/B index: 0.33	Ventricle: 5.8 Brain: 108.8 V/B index: 0.05	79.8 %	none
12	English bulldog, male, 3 years	Triventricular hydrocephalus	Obtundation, circling, ataxia of all 4 limbs	8	Ventricle: 24.5 Brain: 89.6 V/B index: 0.27	Ventricle: 16.6 Brain: 98.2 V/B index: 0.16	32.3%	none
13	Chihuahua mix, male, 14 weeks	Tetraentricular hydrocephalus	Obtundation, circling, central blindness, head tilt, ventrolateral strabismus	2 days	Ventricle: 16.4 Brain: 41.8 V/B index: 0.39	Ventricle: 16.4 Brain: 41.8 V/B index: 0.39	0	Obtundation, circling, central blindness, head tilt, ventrolateral strabismus
14	German Shepherd dog mixed breed, neutered male, 2 years	Tetraentricular hydrocephalus, severe syringomyelia	Obtundation and ataxia on all four limbs, unilateral ventral strabismus, head tilt.	1	Ventricle: 32.7 Brain: 94.2 V/B index: 0.34	Ventricle: 16.4 Brain: 114.3 V/B index: 0.14	49.9%	none
15	Tibet spaniel, male, 3 years	Triventricular hydrocephalus	Obtundation, ataxia on all four limbs, head tilt, nystagmus	2	Ventricle: 19.4 Brain: 79.8 V/B index:	Ventricle: 19.4 Brain: 79.8 V/B index:	0	Obtundation, ataxia of all four limbs, head tilt, nystagmus
16	Jack Russel terrier, male, 4 months	Triventricular hydrocephalus	Aimless screaming, obtundation, ataxia of all four limbs	2	Ventricle: 20.2 Brain: 64.9 V/B index: 31.1	Ventricle: 9.4 Brain: 75.7 V/B index: 0.12	53.5%	none
17	Groenendale, neutered female, 4 years	Tetraentricular hydrocephalus	Aimless screaming, obtundation, ataxia of all four limbs	8	Ventricle: 22.6 Brain: 74.3 V/B index: 0.3	Ventricle: 18.4 Brain: 78.5 V/B index: 0.23	18.6%	none
18	Papillon, female, 7 months	Biventricular hydrocephalus, supracollicular fluid accumulation	Obtundation, ataxia of all four limbs, Ventrolateral strabism, circling	72	Ventricle: 18.2 Brain: 55.8 V/B index: 0.32	Ventricle: 18.2 Brain: 55.8 V/B index: 0.32	0	Obtundation, ataxia, Ventrolateral strabismus, circling
19	Mixed breed, male, 3 months	Biventricular hydrocephalus	Central blindness, circling, ataxia of all four limbs, ventrolateral strabismus	8	Ventricle: 18.8 Brain: 56.2 V/B index: 0.33	Ventricle: 18.8 Brain: 56.2 V/B index: 0.33	0	Central blindness, circling, ataxia of all four limbs, ventrolateral strabismus
20	Cavalier King Charles spaniel, male, 5 years	Triventricular hydrocephalus	Obtundation	16	Ventricle: 18.6 Brain: 84.5 V/B index: 0.22	Ventricle: 0.32 Brain: 102.7 V/B index: 0.003	98%	none
21	Austrian hound, male, 5 years	Triventricular hydrocephalus	Obtundation, circling, head tremor, nystagmus	1 day	Ventricle: 21.8 Brain: 82.8 V/B index: 0.26	Ventricle: 5.6 Brain: 95 V/B index: 0.05	73.4%	none

22	English bulldog, male, 9 months	Biventricular hydrocephalus, supracollicular fluid accumulation	Obtundation, hyperaesthesia of head and neck	4	Ventricle: 24.7 Brain: 92.2 V/B index: 0.26	Ventricle: 12.8 Brain: 103.1 V/B index: 0.12	42.8%	none
23	Pug, neutered male, 2 months	Biventricular hydrocephalus	Obtundation, ataxia of all four limbs	16	Ventricle: 16.6 Brain: 48 V/B index: 0.34	Ventricle: 10.4 Brain: 53.8 V/B index: 0.19	37.4%	none
24	Bullterrier, female, 3 years	Biventricular hydrocephalus	Obtundation	20	Ventricle: 26.7 Brain: 83 V/B index: 0.32	Ventricle: 18.4 Brain: 91.5 V/B index: 0.2	31.1%	none
25	Peruvian hairless dog, male, 4 months	Biventricular hydrocephalus	Ataxia of all four limbs, circling, central blindness	3	Ventricle: 22.4 Brain: 63 V/B index: 0.35	Ventricle: 18.2 Brain: 67.2 V/B index: 0.27	18.7%	none
26	Shitzu, male, 4 months	Triventricular hydrocephalus, supracollicular fluid accumulation	Circling, central blindness, obtundation	4	Ventricle: 16.5 Brain: 38 V/B index: 0.43	Ventricle: 9.4 Brain: 45.1 V/B index: 0.2	43.1%	Circling
27	English bulldog, male, 6 months	Biventricular hydrocephalus	Central blindness, obtundation, seizures	5	Ventricle: 16.8 Brain: 74.2 V/B index: 0.22	Ventricle: 16.8 Brain: 74.2 V/B index: 0.22	0%	Central blindness, obtundation, seizures
28	Boxer, female, 15 months	Tetraventricular hydrocephalus	Tetraparesis, nystagmus obtundation	1 day	Ventricle: 26.7 Brain: 82 V/B index: 0.32	Ventricle: 6.8 Brain: 101.9 V/B index: 0.06	74.6%	none
29	West Highland White terrier, male, 3 months	Biventricular hydrocephalus, supracollicular fluid accumulation	Ataxia all four limbs, obtundation, ventrolateral strabismus	3	Ventricle: 18.6 Brain: 62.8 V/B index: 0.29	Ventricle: 9.2 Brain: 72.2 V/B index: 0.12	50.6%	none
30	Miniature bullterrier, female, 9 months	Tetraventricular hydrocephalus, syringomyelia	Obtundation, ataxia of all four limbs, pain in neck and head	2	Ventricle: 22.8 Brain: 72.6 V/B index: 0.29	Ventricle: 16.2 Brain: 79.8 V/B index: 0.2	29%	none
31	Austrian hound, male, 4 months	Tetraventricular hydrocephalus, syringomyelia	Obtundation, ataxia of all four limbs	6	Ventricle: 18.9 Brain: 65.2 V/B index:	Ventricle: 14.1 Brain: 70 V/B index:	25.4%	none
32	Rottweiler, neutered male, 3 years	Triventricular hydrocephalus, syringomyelia	Obtundation, aggression, pain at head and neck	2	Ventricle: 13.6 Brain: 110 V/B index: 0.12	Ventricle: 5.6 Brain: 118 V/B index: 0.04	58.9%	none
33	German Shepherd dog, female, 5 months	Triventricular hydrocephalus	Ataxia of all four limbs, central blindness	8	Ventricle: 24.6 Brain: 64.3 V/B index: 0.38	Ventricle: 18.4 Brain: 70.5 V/B index: 0.26	25.2%	none
34	German Pinscher, neutered male, 18 months	Biventricular hydrocephalus	Obtundation, central blindness, head tilt	6	Ventricle: 22.9 Brain: 74.2 V/B index: 0.3	Ventricle: 8.2 Brain: 88.9 V/B index: 0.1	64.2%	Central blindness

35	Labrador retriever, male, 18 months	Triventricular hydrocephalus	central blindness, circling	12	Ventricle: 22.4 Brain: 82 V/B index: 0.25	Ventricle: 22.4 Brain: 82 V/B index: 0.25	0%	central blindness, circling
36	Chihuahua, female, 6 months	Triventricular hydrocephalus, syringomyelia	Circling, head tilt	16	Ventricle: 18.5 Brain: 62.4 V/B index: 0.29	Ventricle: 12.5 Brain: 68.8 V/B index: 0.18	30.9%	none
37	Chihuahua, neutered male, 2 years	Triventricular hydrocephalus, syringomyelia	Obtundation	20	Ventricle: 19.4 Brain: 64.9 V/B index: 0.29	Ventricle: 5.6 Brain: 78.7 V/B index: 0.07	71.2%	none
38	French bulldog, male, 3 years	Tetraentricular hydrocephalus	Obtundation, ataxia of all four limbs	12	Ventricle: 22.2 Brain: 76 V/B index: 0.29	Ventricle: 3.6 Brain: 85 V/B index: 0.04	83.8 %	none
39	Chihuahua, female, 9 months	Triventricular hydrocephalus	Obtundation	24	Ventricle:19.8 Brain: 56.8 V/B index: 0.34	Ventricle: 4.2 Brain: 76.4 V/B index: 0.05	78.9%	none
40	Chihuahua, male, 4 months	Triventricular hydrocephalus, supracollicular fluid accumulation	Central blindness obtundation, ataxia of all four limbs	6	Ventricle: 18.4 Brain: 59.7 V/B index: 0.3	Ventricle: 3.1 Brain: 72.8 V/B index: 0.04	83.2%	none
41	West Highland White terrier, male, 6 months	Triventricular hydrocephalus, syringomyelia	Circling, obtundation	8	Ventricle: 16.5 Brain: 45.2 V/B index: 0.36	Ventricle: 6.1 Brain: 55.6 V/B index: 0.1	63.1%	none
42	Continental bulldog, female, 1 year	Triventricular hydrocephalus, supracollicular fluid accumulation	Head tilt, obtundation	12	Ventricle: 24.5 Brain: 83.3 V/B index: 0.29	Ventricle: 12.6 Brain: 95.2 V/B index: 0.13	48.6%	none
43	French bulldog, female, 6 months	Triventricular hydrocephalus	Obtundation	4	Ventricle: 20.2 Brain: 58.5 V/B index: 0.34	Ventricle: 12.9 Brain: 65.8 V/B index: 0.19	36.2%	none
44	Rhodesian Ridgeback, female, 3 months	Tretaventricular hydrocephalus, syringomyelia	Head tilt	1	Ventricle: 21.6 Brain: 66.3 V/B index: 0.32	Ventricle: 13.2 Brain: 74.2 V/B index: 0.17	36.6%	none
45	French bulldog, male, 3 years	Biventricular hydrocephalus	Obtundation	8	Ventricle: 23.2 Brain: 64.6 V/B index:	Ventricle: 15 Brain: 72.8 V/B index:	35.5%	none