

**Supplemental Table 1.** VHS cut-off values with sensitivity, specificity, and likelihood ratio for RL radiographic view in rhesus macaques with cardiac disease (ACD group)

RL-VHS	Sensitivity (%)	95% CI	Specificity (%)	95% CI	Likelihood ratio
>7.55	100	87%–100%	0.8	0.04%–5%	1.01
>8	100	87%–100%	2.5	0.7%–7%	1.03
>8.3	100	87%–100%	3.4	1%–8%	1.04
>8.65	100	87%–100%	5.9	3%–12%	1.06
>8.9	96	81%–100%	5.9	3%–12%	1.02
>9.05	96	81%–100%	12	7%–19%	1.09
>9.15	92	76%–99%	14	9%–22%	1.08
>9.25	92	76%–99%	18	13%–26%	1.13
>9.35	92	76%–99%	24	18%–33%	1.22
>9.45	92	76%–99%	29	21%–37%	1.29
>9.55	88	71%–96%	32	24%–41%	1.3
>9.65	88	71%–96%	36	28%–45%	1.39
>9.75	77	58%–89%	44	35%–52%	1.37
>9.85	77	58%–89%	50	41%–58%	1.53
>9.95	73	54%–86%	55	46%–63%	1.61
>10.05	65	46%–81%	61	52%–69%	1.66
>10.15	65	46%–81%	71	63%–79%	2.29
>10.25	62	43%–78%	77	69%–84%	2.71
>10.35	46	29%–65%	81	73%–87%	2.39
>10.45	38	22%–57%	85	77%–90%	2.54
>10.55	31	17%–50%	88	81%–93%	2.62
>10.65	27	14%–46%	92	86%–96%	3.56
>10.75	23	11%–42%	93	87%–97%	3.43
>10.85	23	11%–42%	95	89%–98%	4.58
>10.95	19	9%–38%	95	89%–98%	3.81
>11.05	15	6%–34%	96	91%–98%	3.66
>11.20	15	6%–34%	97	93%–99%	6.1
>11.40	8	1%–24%	99	95%–100%	9.15
>11.55	0	0%–13%	99	95%–100%	0

The optimal cut-off value for VHS was determined to be 10.25 (sensitivity, 62%; specificity, 77%) according to the maximal Youden index.

**Supplemental Table 2.** VHS cut-off values with sensitivity, specificity, and likelihood ratio in the VD radiographic view of rhesus macaques with cardiac diseases (ACD group)

VD-VHS	Sensitivity (%)	95% CI	Specificity (%)	95% CI	Likelihood ratio
>8.30	100	88%–100%	0.8	0.04%–5%	1.01
>8.60	100	88%–100%	2	0.2%–6%	1.02
>8.90	100	88%–100%	3	0.7%–7%	1.03
>9.05	100	88%–100%	3	1%–8%	1.04
>9.15	100	88%–100%	4	2%–9%	1.04
>9.25	100	88%–100%	5	2%–11%	1.05
>9.35	100	88%–100%	8	4%–14%	1.08
>9.45	97	83%–100%	8	4%–14%	1.04
>9.55	97	83%–100%	8	5%–15%	1.05
>9.65	97	83%–100%	9	5%–16%	1.06
>9.75	93	78%–99%	11	6%–18%	1.05
>9.85	93	78%–99%	13	8%–20%	1.07
>9.95	90	74%–96%	15	10%–23%	1.06
>10.05	83	65%–92%	21	15%–29%	1.05
>10.15	83	65%–92%	29	21%–37%	1.16
>10.25	76	58%–88%	32	24%–41%	1.12
>10.35	76	58%–88%	42	34%–51%	1.31
>10.45	76	58%–88%	51	42%–60%	1.56
>10.55	69	51%–83%	58	49%–66%	1.64
>10.65	66	47%–80%	63	54. %–71%	1.77
>10.75	55	38%–72%	68	59%–76%	1.73
>10.85	48	31%–66%	75	66%–82%	1.92
>10.95	45	28%–62%	78	70%–85%	2.05
>11.05	3	20%–53%	81	73%–87%	1.78
>11.15	28	15%–46%	84	76%–90%	1.73
>11.25	28	15%–46%	88	81%–93%	2.35
>11.35	24	12%–42%	92	86%–96%	3.19
>11.45	21	10%–38%	96	91%–98%	4.92
>11.55	21	10%–38%	97	93%–99%	8.21
>11.80	14	5%–31%	98	94%–100%	8.21
>12.10	7	1%–22%	100	97%–100%	
>12.70	3	0.2%–17%	100	97%–100%	

The optimal cut-off value of VHS was determined to be 10.65 (sensitivity, 65.52%; specificity, 63.03%), according to the Youden index.