

Supplementary Table 1. LMS values from reference charts for testicular volume measured with orchidometer or ultrasonography.

Values represent the skewness (L), median (M), and coefficient of variation (S) parameters of the LMS curve, based on logarithmically transformed testicular volumes. For orchidometer, the transformation was $y = \log_{10}(x+10)$, and for ultrasonography $y = \log_{10}(x+0.5)+3$, x being the measured testicular volume in mL.

After log-transformation, the SD scores for testicular volume can be calculated by using the L, M, and S value from the appropriate age in the following formula: $SDS = ((y/M)^L - 1) / (L \cdot S)$, y being the log-transformed testicular volume.

Age (years)	Orchidometer			Ultrasonography		
	L	M	S	L	M	S
0.6	-9.54188	1.06274	0.01683	-10.34901	2.95210	0.01722
0.7	-9.54251	1.06272	0.01683	-10.33299	2.95331	0.01730
0.8	-9.54288	1.06271	0.01683	-10.31643	2.95455	0.01738
0.9	-9.54324	1.06270	0.01682	-10.29953	2.95583	0.01747
1.0	-9.54387	1.06268	0.01682	-10.28239	2.95712	0.01756
1.1	-9.54505	1.06265	0.01681	-10.26536	2.95840	0.01764
1.2	-9.54678	1.06260	0.01680	-10.24888	2.95964	0.01773
1.3	-9.54903	1.06253	0.01679	-10.23316	2.96083	0.01781
1.4	-9.55195	1.06245	0.01677	-10.21826	2.96195	0.01789
1.5	-9.55587	1.06234	0.01674	-10.20439	2.96300	0.01796
1.6	-9.56069	1.06221	0.01671	-10.19153	2.96396	0.01803
1.7	-9.56590	1.06206	0.01668	-10.17934	2.96488	0.01809
1.8	-9.57099	1.06191	0.01665	-10.16774	2.96575	0.01815
1.9	-9.57540	1.06179	0.01662	-10.15669	2.96659	0.01821
2.0	-9.57922	1.06168	0.01660	-10.14601	2.96739	0.01827
2.1	-9.58175	1.06161	0.01658	-10.13581	2.96816	0.01832
2.2	-9.58301	1.06157	0.01657	-10.12599	2.96889	0.01837
2.3	-9.58296	1.06157	0.01657	-10.11651	2.96961	0.01842
2.4	-9.58139	1.06162	0.01658	-10.10716	2.97031	0.01847
2.5	-9.57849	1.06170	0.01660	-10.09806	2.97099	0.01852
2.6	-9.57424	1.06182	0.01663	-10.08947	2.97163	0.01857
2.7	-9.56924	1.06196	0.01666	-10.08130	2.97225	0.01861
2.8	-9.56305	1.06214	0.01670	-10.07428	2.97277	0.01865
2.9	-9.55599	1.06234	0.01674	-10.06827	2.97322	0.01868
3.0	-9.54812	1.06256	0.01679	-10.06264	2.97365	0.01871
3.1	-9.53881	1.06282	0.01685	-10.05663	2.97410	0.01875
3.2	-9.52806	1.06312	0.01692	-10.04969	2.97462	0.01878
3.3	-9.51577	1.06347	0.01700	-10.04162	2.97522	0.01883
3.4	-9.50208	1.06385	0.01709	-10.03220	2.97593	0.01888
3.5	-9.48709	1.06427	0.01718	-10.02100	2.97676	0.01894

3.6	-9.47124	1.06471	0.01729	-10.00789	2.97774	0.01901
3.7	-9.45506	1.06515	0.01739	-9.99234	2.97890	0.01910
3.8	-9.43903	1.06560	0.01750	-9.97511	2.98019	0.01919
3.9	-9.42357	1.06602	0.01760	-9.95562	2.98164	0.01930
4.0	-9.40901	1.06642	0.01769	-9.93447	2.98321	0.01942
4.1	-9.39571	1.06678	0.01778	-9.91196	2.98488	0.01954
4.2	-9.38351	1.06711	0.01786	-9.88810	2.98665	0.01968
4.3	-9.37169	1.06743	0.01794	-9.86338	2.98847	0.01982
4.4	-9.35996	1.06775	0.01802	-9.83736	2.99039	0.01996
4.5	-9.34784	1.06808	0.01810	-9.81044	2.99236	0.02012
4.6	-9.33542	1.06841	0.01818	-9.78293	2.99437	0.02027
4.7	-9.32295	1.06875	0.01826	-9.75546	2.99637	0.02043
4.8	-9.31021	1.06909	0.01835	-9.72862	2.99832	0.02059
4.9	-9.29686	1.06944	0.01844	-9.70291	3.00018	0.02073
5.0	-9.28263	1.06982	0.01854	-9.67833	3.00194	0.02088
5.1	-9.26728	1.07023	0.01864	-9.65447	3.00365	0.02102
5.2	-9.25083	1.07066	0.01875	-9.63095	3.00533	0.02115
5.3	-9.23367	1.07112	0.01887	-9.60786	3.00697	0.02129
5.4	-9.21639	1.07157	0.01899	-9.58539	3.00855	0.02142
5.5	-9.19930	1.07202	0.01911	-9.56354	3.01009	0.02155
5.6	-9.18233	1.07246	0.01922	-9.54206	3.01160	0.02168
5.7	-9.16533	1.07290	0.01934	-9.52094	3.01307	0.02180
5.8	-9.14797	1.07335	0.01946	-9.50022	3.01451	0.02193
5.9	-9.12967	1.07382	0.01959	-9.47971	3.01593	0.02205
6.0	-9.11030	1.07432	0.01973	-9.45925	3.01733	0.02217
6.1	-9.08949	1.07485	0.01987	-9.43853	3.01875	0.02229
6.2	-9.06728	1.07542	0.02003	-9.41735	3.02020	0.02242
6.3	-9.04447	1.07600	0.02019	-9.39608	3.02164	0.02255
6.4	-9.02182	1.07657	0.02035	-9.37537	3.02304	0.02267
6.5	-9.00045	1.07711	0.02051	-9.35571	3.02436	0.02279
6.6	-8.98089	1.07760	0.02065	-9.33738	3.02559	0.02290
6.7	-8.96337	1.07804	0.02078	-9.32060	3.02671	0.02300
6.8	-8.94839	1.07841	0.02089	-9.30569	3.02770	0.02309
6.9	-8.93647	1.07870	0.02097	-9.29298	3.02854	0.02317
7.0	-8.92727	1.07893	0.02104	-9.28223	3.02925	0.02323
7.1	-8.92090	1.07909	0.02109	-9.27348	3.02982	0.02328
7.2	-8.91651	1.07920	0.02112	-9.26596	3.03031	0.02333
7.3	-8.91326	1.07928	0.02114	-9.25900	3.03077	0.02337
7.4	-8.91062	1.07934	0.02116	-9.25227	3.03121	0.02341
7.5	-8.90849	1.07940	0.02118	-9.24569	3.03164	0.02345
7.6	-8.90697	1.07943	0.02119	-9.23917	3.03207	0.02349
7.7	-8.90614	1.07945	0.02120	-9.23250	3.03250	0.02353
7.8	-8.90561	1.07947	0.02120	-9.22524	3.03297	0.02357
7.9	-8.90492	1.07948	0.02120	-9.21674	3.03352	0.02363

8.0	-8.90361	1.07952	0.02121	-9.20653	3.03418	0.02369
8.1	-8.90113	1.07958	0.02123	-9.19400	3.03499	0.02376
8.2	-8.89660	1.07969	0.02127	-9.17811	3.03601	0.02386
8.3	-8.88944	1.07987	0.02132	-9.15860	3.03726	0.02398
8.4	-8.87869	1.08013	0.02140	-9.13471	3.03877	0.02412
8.5	-8.86364	1.08050	0.02151	-9.10576	3.04060	0.02430
8.6	-8.84528	1.08095	0.02165	-9.07273	3.04267	0.02450
8.7	-8.82296	1.08149	0.02181	-9.03463	3.04502	0.02473
8.8	-8.79701	1.08212	0.02201	-8.99153	3.04766	0.02499
8.9	-8.76774	1.08283	0.02223	-8.94359	3.05056	0.02528
9.0	-8.73519	1.08361	0.02247	-8.89063	3.05371	0.02559
9.1	-8.69955	1.08446	0.02275	-8.83238	3.05711	0.02594
9.2	-8.66143	1.08536	0.02304	-8.76935	3.06073	0.02632
9.3	-8.62009	1.08634	0.02336	-8.70000	3.06463	0.02673
9.4	-8.57537	1.08739	0.02371	-8.62384	3.06882	0.02717
9.5	-8.52670	1.08852	0.02409	-8.53989	3.07335	0.02766
9.6	-8.47358	1.08975	0.02452	-8.44741	3.07822	0.02820
9.7	-8.41603	1.09106	0.02498	-8.34641	3.08343	0.02878
9.8	-8.35329	1.09249	0.02549	-8.23591	3.08899	0.02941
9.9	-8.28490	1.09403	0.02605	-8.11546	3.09490	0.03010
10.0	-8.21052	1.09569	0.02667	-7.98473	3.10115	0.03084
10.1	-8.12956	1.09748	0.02735	-7.84313	3.10774	0.03163
10.2	-8.03917	1.09947	0.02812	-7.68753	3.11478	0.03249
10.3	-7.94576	1.10149	0.02893	-7.52487	3.12194	0.03339
10.4	-7.84187	1.10373	0.02984	-7.34661	3.12956	0.03436
10.5	-7.72970	1.10613	0.03084	-7.15505	3.13755	0.03539
10.6	-7.60795	1.10870	0.03195	-6.94862	3.14594	0.03649
10.7	-7.47667	1.11146	0.03315	-6.72696	3.15480	0.03767
10.8	-7.33443	1.11443	0.03448	-6.48800	3.16421	0.03892
10.9	-7.18056	1.11763	0.03595	-6.23018	3.17431	0.04026
11.0	-7.01450	1.12107	0.03755	-5.95427	3.18511	0.04167
11.1	-6.83537	1.12478	0.03930	-5.65803	3.19678	0.04318
11.2	-6.64270	1.12877	0.04121	-5.34238	3.20940	0.04476
11.3	-6.43934	1.13301	0.04326	-5.01257	3.22288	0.04641
11.4	-6.22193	1.13757	0.04546	-4.66632	3.23747	0.04813
11.5	-5.99143	1.14245	0.04782	-4.30695	3.25321	0.04991
11.6	-5.74793	1.14769	0.05032	-3.93684	3.27021	0.05172
11.7	-5.49182	1.15329	0.05295	-3.55874	3.28850	0.05355
11.8	-5.22246	1.15931	0.05570	-3.17325	3.30812	0.05538
11.9	-4.94397	1.16568	0.05851	-2.78424	3.32888	0.05716
12.0	-4.65312	1.17252	0.06139	-2.39278	3.35068	0.05886
12.1	-4.35212	1.17979	0.06429	-1.99774	3.37357	0.06048
12.2	-4.04117	1.18753	0.06718	-1.60061	3.39737	0.06198
12.3	-3.72098	1.19575	0.07002	-1.20217	3.42195	0.06333

12.4	-3.39259	1.20445	0.07277	-0.80367	3.44709	0.06451
12.5	-3.05647	1.21363	0.07538	-0.40565	3.47256	0.06549
12.6	-2.71412	1.22327	0.07781	-0.01031	3.49815	0.06625
12.7	-2.36659	1.23333	0.08001	0.38060	3.52364	0.06678
12.8	-2.01339	1.24384	0.08196	0.76499	3.54891	0.06706
12.9	-1.65608	1.25474	0.08362	1.13945	3.57386	0.06711
13.0	-1.29485	1.26601	0.08496	1.50222	3.59840	0.06691
13.1	-0.93034	1.27760	0.08596	1.85194	3.62245	0.06650
13.2	-0.56355	1.28946	0.08661	2.18619	3.64592	0.06587
13.3	-0.19479	1.30154	0.08690	2.50413	3.66882	0.06504
13.4	0.17549	1.31380	0.08683	2.80525	3.69114	0.06405
13.5	0.54658	1.32615	0.08641	3.09022	3.71287	0.06290
13.6	0.91790	1.33855	0.08565	3.36118	3.73399	0.06161
13.7	1.28884	1.35092	0.08457	3.62157	3.75444	0.06022
13.8	1.65820	1.36318	0.08320	3.87396	3.77416	0.05873
13.9	2.02565	1.37527	0.08156	4.11749	3.79315	0.05719
14.0	2.39055	1.38713	0.07970	4.35011	3.81145	0.05559
14.1	2.75212	1.39868	0.07764	4.56945	3.82900	0.05397
14.2	3.10942	1.40987	0.07542	4.77433	3.84584	0.05235
14.3	3.46216	1.42066	0.07307	4.96414	3.86198	0.05073
14.4	3.81021	1.43101	0.07064	5.13909	3.87749	0.04913
14.5	4.15182	1.44086	0.06815	5.29810	3.89231	0.04756
14.6	4.48773	1.45022	0.06563	5.44325	3.90654	0.04604
14.7	4.81719	1.45906	0.06310	5.57543	3.92018	0.04456
14.8	5.13878	1.46734	0.06061	5.69510	3.93320	0.04314
14.9	5.45216	1.47506	0.05816	5.80339	3.94563	0.04179
15.0	5.75810	1.48226	0.05577	5.90249	3.95755	0.04050
15.1	6.05481	1.48891	0.05345	5.99336	3.96889	0.03928
15.2	6.34243	1.49505	0.05123	6.07750	3.97969	0.03814
15.3	6.62014	1.50067	0.04911	6.15583	3.98992	0.03706
15.4	6.88710	1.50579	0.04709	6.22908	3.99958	0.03606
15.5	7.14526	1.51049	0.04517	6.29865	4.00875	0.03512
15.6	7.39157	1.51473	0.04338	6.36415	4.01735	0.03424
15.7	7.62692	1.51858	0.04169	6.42630	4.02543	0.03343
15.8	7.85098	1.52205	0.04012	6.48536	4.03302	0.03268
15.9	8.06410	1.52519	0.03866	6.54169	4.04018	0.03198
16.0	8.26618	1.52802	0.03730	6.59542	4.04692	0.03133
16.1	8.45777	1.53058	0.03604	6.64681	4.05328	0.03073
16.2	8.63807	1.53288	0.03488	6.69570	4.05925	0.03017
16.3	8.80934	1.53498	0.03379	6.74265	4.06490	0.02965
16.4	8.96985	1.53687	0.03280	6.78716	4.07020	0.02917
16.5	9.12016	1.53858	0.03189	6.82940	4.07518	0.02873
16.6	9.26190	1.54014	0.03104	6.86979	4.07989	0.02831
16.7	9.39345	1.54154	0.03028	6.90795	4.08430	0.02792

16.8	9.51631	1.54281	0.02957	6.94429	4.08846	0.02757
16.9	9.62986	1.54396	0.02893	6.97871	4.09237	0.02723
17.0	9.73819	1.54504	0.02833	7.01215	4.09615	0.02691
17.1	9.83671	1.54600	0.02779	7.04355	4.09968	0.02662
17.2	9.92883	1.54689	0.02729	7.07364	4.10304	0.02634
17.3	10.01372	1.54769	0.02684	7.10210	4.10620	0.02609
17.4	10.09209	1.54842	0.02642	7.12898	4.10917	0.02585
17.5	10.16272	1.54908	0.02606	7.15374	4.11190	0.02563
17.6	10.23046	1.54970	0.02571	7.17768	4.11452	0.02542
17.7	10.29100	1.55026	0.02540	7.19942	4.11690	0.02523
17.8	10.34652	1.55076	0.02512	7.21959	4.11910	0.02506
17.9	10.39790	1.55123	0.02486	7.23844	4.12115	0.02490
18.0	10.44526	1.55165	0.02463	7.25598	4.12306	0.02475
18.1	10.48861	1.55205	0.02441	7.27216	4.12481	0.02462
18.2	10.52835	1.55240	0.02422	7.28713	4.12643	0.02449
18.3	10.56559	1.55274	0.02404	7.30090	4.12793	0.02438
18.4	10.59895	1.55304	0.02388	7.31381	4.12932	0.02427
18.5	10.63183	1.55333	0.02372	7.32667	4.13071	0.02417
18.6	10.66218	1.55360	0.02357	7.33850	4.13199	0.02407
18.7	10.69148	1.55386	0.02343	7.35001	4.13323	0.02398
18.8	10.71998	1.55412	0.02330	7.36129	4.13445	0.02389
18.9	10.74810	1.55437	0.02316	7.37245	4.13565	0.02380
19.0	10.77602	1.55462	0.02303	7.38352	4.13685	0.02371