S2. Best Fits. Cirrhosis

	Best fit Distribution	MLEs	KS-test:	
			D-statistics	p-value
Glucose				
Ctrl Female	Lognormal	0.25698444692114949, 76.460632754515151, 65.363728990195526	0.056184065779072645	0.99959718321177315
Ctrl Male	Beta	1.308055650752214, 2.22827639632253434, 117.463465212153939, 88.215053015371151	0.066488671353012174	0.99443661380517578
Cirrho Female	Logistic	63.228563011446449, 11.052744873752602	0.094495301121417963	0.867391188876416 09
Cirrho Male	Beta	1.662775864901626, 1.497001852607929, 58.972655146560666, 106.93303626780543	0.083553256989783081	0.942800067605443 88
HOMA-IR				
Ctrl Female	Beta	0.80008367423413 1, 0.74105063253226 9, 1.26754376177661 9, 0.77245623822338039	0.098560479015289471	0.831937507851763 46

Ctrl Male	Weibull max	2.793898 7643066 74, 1.949923 8786554 56, 0.563414 5186438 5939	0.0975307 264114609 33	0.8412326437 7349249
Cirrho Female	Beta	0.848233 4943232 37, 0.815353 4011833 48, 1.909999 9999999 99, 1.150250 7586659 285	0.1004686 172154109 5	0.8142099426 7283586
Cirrho Male	Exponential Powerlaw	1.898017 2919049 96, 1.211603 8070440 95, 0.756093 1512809 9641	0.0974732 173520758 14	0.8417457948 9151025
Nitrites				
Ctrl Female	Lognormal	0.498115 7224611 9007, 2.329513 2641495 79, 10.63423 3107458 794	0.0622585 536781507 66	0.9977707386 5062949
Ctrl Male	Exponential powerlaw	1.459932 6649126 92, 4.660333 7121492 24, 22.70223 1623755 175	0.0662426 783803078 4	0.9946984420 4570934
Cirrho Female	Lognormal	0.501528 5642146 13, 9.322118 0102546 83, 40.49565 1952921 861	0.0641732 476145621 12	0.9965474459 3099565
Cirrho Male	Powerlaw	0.953019 6883183 62,	0.0861254 964751911 32	0.9280345180 3282444

		7.399999999999999, 40.926192272453605		
HbA_{1C}				
Ctrl Female	Powerlaw	1.0792485599426 09, 16.965381553990 26, 15.034618533350 297	0.0864656147392841 58	0.92593873890288148
Ctrl Male	Beta	1.8045028274430 31, 1.7820899217365 74, 16.158085213537 26, 23.633108718379 699	0.0736442553108785 92	0.98175465408459084
Cirrho Female	Powerlaw	1.0718677221865 08, 21.958563928602 10, 20.041436249537 202	0.0778249700591388 54	0.96871082759303651
Cirrho Male	Beta	1.3921054159189 83, 1.3272294780179 53, 18.497648881551 39, 21.732014380026 996	0.0771395255312315 87	0.97117569541114779
Cholesterol				
Ctrl Female	Logistic	148.64394973549 63, 9.1103365756719 015	0.0731206655757184 33	0.98306621579965792
Ctrl Male	Logistic	138.24931022985 30,	0.0906589724385796 77	0.89745109483425023

		7.871331 1254100 189		
Cirro Female	Normal	92.07500 0000000 00, 25.89245 7878695 101	0.0949717 437982928 18	0.8634155555 2183513
Cirrho Male	Normal	110.75, 15.88513 4560336 592	0.0780062 82827	0.9680366521 6086665
Triglycerides				
Ctrl Female	Lognormal	0.256984 4469211 49, 76.46063 2754515 55, 65.36372 8990195 526	0.0561840 657790726 45	0.9995971832 1177315
Ctrl Male	Beta	1.308055 6507522 14, 2.228276 3963225 34, 117.4634 6521215 39, 88.21505 3015371 51	0.0664886 713530121 74	0.9944366138 0517578
Cirrho Female	Logistic	63.22856 3011446 49, 11.05274 4873752 602	0.0944953 011214179 63	0.8673911888 7641609
Cirrho Male	Beta	1.662775 8649016 26, 1.497001 8526079 29, 58.97265 5146560 66, 106.9330 3626780 543	0.0835532 569897830 81	0.9428000676 0544388
Albumin				
Ctrl Female	Exponential Weibull	0.135376 8374991 64, 8.391711 0466614 89,	0.0784619	0.966301201

		3.393406 1829190 99, 1.466266 0504658 758		
Ctrl Male	Beta	2.185063 6619363 26, 1.620409 2205820 47, 3.098482 9529348 88, 2.185063 6619363 26, 1.620409 2205820 47, 3.098482 9529348 88, 2.951312 0560427 63	0.1108117 264	0.6974382447
Cirrho Female	Powerlaw	1.197628 2816368 99, 2.292122 9000421 18, 1.107877 1108135 532	0.0899066 972	0.9029125630
Cirrho Male	Beta	1.803148 7112697 58, 1.184338 5374214 95, 2.210658 5310703 20, 1.795792 9081723 665	0.0993649 780	0.8245400836
Total Bilirubin				
Ctrl Female	Exponential Powerlaw	0.958027 4803070 78, 0.249999 9999999 99, 0.373631 8751915 731	0.1295396 124774778 1	0.4802826969 4324011

Ctrl Male	Logistic	0.628280 1342532 04, 0.087126 8836316 614	0.0900241 453412106 15	0.9020697040 3325448
Cirrho Female	Exponential powerlaw	1.085787 2159394 37, 0.746870 0887985 37, 1.194578 8833503 246	0.0969532 635209766 62	0.8463558437 1114825
Cirrho Male	logistic	2.111152 3860056 334, 0.281256 7306362 8687	0.0839844 708838705 38	0.9404595286 7537297
Direct Bilirubin				
Ctrl Female	Weibull Max	7.994159 4196846 33, 0.816887 8320460 72, 0.634751 8718256 139	0.1205169 925253107 8	0.5789475331 5034464
Ctrl Male	Logistic	0.181209 4659805 29, 0.034022 3608579 34891	0.1158262 754472267 5	0.6346750480 3970787
Cirrho Female	Logistic	0.464513 1528638 30, 0.064453 4980866 03361	0.0627183 684356603 1	0.9975142932 0145579
Cirrho Male	Logistic	1.658214 5431575 46, 0.218564 6254402 193	0.0813174 432424964 57	0.9540573779 8255363
HGF				
Ctrl Female	Beta	2.010356 5100863 77, 2.380839 3065242 15, 3.435726 2359246 69,	0.0529649 325	0.9998743249

		12.597039472126415		
Ctrl Male	Beta	1.518229632786352, 1.443548187870397, 4.046448243308306, 8.9859617844318826	0.1230367874	0.5502462817
Cirrho Female	Log Normal	0.10529041678170808, 45.678372451558009, 59.697327956322241	0.0969057137	0.8467747534
Cirrho Male	Exponential Weibull	4.12858348941313434, 7.04931357767917676, 78.7336970803984747, 92.942696441943497	0.0942389968	0.8695087939
EGF				
Ctrl Female	Exponential Weibull	0.18960058890951515, 6.78881850724296060, 0.68983918281693030, 0.85149606126249971	0.1152887585	0.6412478860
Ctrl Male	Weibull min	3.24216733140551313, 0.23917586083365252, 1.27768012276289333	0.0723956347	0.9847717210

Cirrho Female	Beta	1.786292 4815315 58, 3.431939 9645556 49, 0.959142 9100227 08, 2.056329 3028645 528	0.1109764 053	0.6953265856
Cirrho Male	Beta	2.143771 6465513 40, 2.584375 6580903 17, 1.287662 7896332 35, 2.731166 5692735 323	0.0898864 080	0.9030577964
Insulin				
Ctrl Female	Exponential Weibull	0.549119 2694323 20, 1.608146 1296582 79, 0.899999 9999999 99, 11.17150 8617797 514	0.1065275 287	0.7535267607
Ctrl Male	Gilbrat	0.804667 1667729 97, 3.964270 3426780 441	0.1052792 981	0.7702725379
Cirrho Female	Exponential Powerlaw	0.748573 7812878 72, 4.599999 9999999 98, 11.61005 4843027 559	0.1403785 192	0.3770575718
Cirrho Male	Gilbrat	3.677159 5439225 28 2.523881 1666911 03	0.0666746 637	0.9942322426
Glucagon				

Ctrl Female	Powerlaw	0.928123 7022205 75, 21.39999 9999999 99, 33.61257 9033675 303	0.0917999 111	0.8888887974
Ctrl Male	Powerlaw	1.025614 8908808 26, 21.18120 8947685 96, 28.41879 1256674 865	0.0957901 443	0.8564701411
Cirrho Female	Powerlaw	0.963286 7977770 56, 17.19999 9999999 99, 26.80004 6797940 237	0.1033976 867	0.7958430607
Cirrho Male	Powerlaw	1.025505 3617040 54, 17.38469 8879273 54, 23.41530 1217001 84	0.0972156 596	0.8440360428
Insulin/Glucagon				
Ctrl Female	Exponential powerlaw	0.899959 9804968 32, 0.025423 7288135 59317, 0.352675 6016095 984	0.1020113 859242557 9	0.7994425948 4051516
Ctrl Male	Lognormal	0.811545 7968261 43, 0.010121 4438405 69431, 0.133644 7721473 556	0.1058816 059255459 6	0.7621701688 072815
Cirrho Female	Weibull min	1.407922 7999317 42, 0.121261 4482337 78,	0.0941417 978061723 23	0.8703079522 631948

		0.2811513027678 7703		
Cirrho Male	Lognormal	0.6858341454557 7615, 0.0716003654139 82028, 0.1598539360088 4107	0.0745947 187034583 51	0.9791972845 6537236
Ammonia				
Ctrl Female	Beta	1.0251210363258 3, 0.6746841499105 76, 1.1435174776187 3, 5.4564825223812 7	0.1217024 54018753	0.5531332058 38336
Ctrl Male	Logistic	5.0768474994738 8, 1.1378161701979 4	0.0713760 183432732	0.9779938073 09539
Cirrho Female	Beta	21340894.757124 7, 28.556600786132 3, 1552413 0.35914, 1552416 2.371319 9	0.1681555 43534213	0.1856163712 44473
Cirrho Male	Exponential Weibull	0.7860716044192 38, 1.0155301001627 3	0.1208542 49141593	0.5619772228 81924
Nitrites				
Ctrl Female	Lognormal	0.4981157224611 9007, 2.3295132641495 79, 10.6342331074587 94	0.06225853	0.9977707386 5062949

Ctrl Male	Exponential powerlaw	1.459932 6649126 925, 4.660333 7121492 245, 22.70223 1623755 175	0.0662426 7838030784	0.9946984420 4570934
Cirrho Female	Lognormal	0.501528 5642146 1389, 9.322118 0102546 839, 40.49565 1952921 861	0.0641732 476145621 12	0.9965474459 3099565
Cirrho Male	Powerlaw	0.953019 6883183 6281, 7.399999 9999999 995, 40.92619 2272453 605	0.0861254 964751911 32	0.9280345180 3282444
Urea				
Ctrl Female	Gilbrat	20.47948 14, 18.75854 154	0.105785	0.722317
Ctrl Male	Normal	17.9, 2.864698 937	0.052033	0.999681
Cirrho Female	Log Normal	1.205468 , 9.639940 , 7.459256	0.103879	0.742248
Cirrho Male	Log normal	0.378920 75, 3.144405 72, 10.77407 086	0.068040	0.986388
Uric Acid				
Ctrl Female	Beta	1.472366 86, 1.472077 62, 9.382656 57, 12.23428 591	0.053176	0.999532
Ctrl Male	Beta	1.864200 19911155 02, 1551683 1104220	0.123456	0.534991

		93.0, 14.867818, 2.104045e+16		
Cirrho Female	Gilbrat	9.168873, 8.330515	0.103879	0.742248
Cirrho Male	Logistic	29.728360 7, 7.737488290	0.068040	0.7218891

Ctrl: Control

Cirrho: Cirrhosis