

**Supplemental Table 1 : Conversion formula for calculating IGF-1 SDS**

$$\text{IGF-1 SDS} = [1 / (\text{SD} * \text{L})] * [(\text{IGF-1} / \text{M})^{\text{L}} - 1]$$

SD : standard deviation ; L : lambda ; IGF-1 : raw value given by the assay in ng/ml ; M : median

**1. Siemens Immulite 2000 new calibration :****Immulite 2000 new calibration : males**

Age groups	n	2.5th percentile	97.5th percentile	Median (M)	Standard deviation (SD)	Lambda (L)
18-20 years	56	116.990	294.954	194.49625595	0.2328003615	0.432814325
21-23 years	60	105.015	266.078	174.94405322	0.2341398753	0.4240318088
24-26 years	54	95.628	243.503	159.63012407	0.2354870927	0.4152492657
27-29 years	50	88.914	227.545	148.72517164	0.2368420549	0.4064666812
30-39 years	55	79.658	206.279	133.87712812	0.2400339878	0.3859737769
40-49 years	49	70.062	184.565	118.54781793	0.2446685557	0.3566976568
50-59 years	54	61.228	164.138	104.30128392	0.2493923984	0.3274209486
60-69 years	48	56.566	154.365	97.006828037	0.2542068014	0.2981437289
70-89 years	34	51.861	145.463	89.832889651	0.2616019064	0.2542275483

**Immulite 2000 new calibration : females**

Age groups	n	2.5th percentile	97.5th percentile	Median (M)	Standard deviation (SD)	Lambda (L)
18-20 years	42	102.361	323.937	209.71772777	0.2707080346	0.8874823245
21-23 years	55	101.170	303.598	192.29078871	0.2697612157	0.6264675361
24-26 years	45	98.317	286.216	177.1454764	0.2688177041	0.3845346927
27-29 years	48	94.755	271.589	164.31709294	0.2678774827	0.1734424787
30-39 years	45	85.699	243.331	141.53918897	0.2656962891	-0.147456537
40-49 years	50	72.348	202.825	119.14007861	0.2626105939	-0.125167729
50-59 years	54	59.183	164.799	102.34289782	0.2595601049	0.2728056826
60-69 years	47	49.749	140.498	90.553996342	0.2565444788	0.6022444431
70-89 years	50	49.683	133.575	82.47758725	0.2520858224	0.101178459

## 2. ROCHE Elecsys®

### ROCHE Elecsys® : males

Age groups	n	2.5th percentile	97.5th percentile	Median (M)	Standard deviation (SD)	Lambda (L)
18-20 years	57	172.923	394.649	269.94043488	0.2087287086	0.3867740554
21-23 years	62	152.064	350.122	238.33128135	0.2110433236	0.3738365709
24-26 years	51	136.337	316.724	214.5425372	0.2133835922	0.3608990761
27-29 years	43	125.501	294.194	198.29024876	0.215749791	0.3479615664
30-39 years	55	109.843	263.063	175.19887123	0.2213733868	0.3177740134
40-49 years	50	92.715	229.163	149.90792435	0.2296622767	0.2746491613
50-59 years	54	82.175	209.872	134.70245779	0.2382617455	0.2315251555
60-69 years	49	76.299	201.608	126.81079165	0.2471833524	0.1884021925
70-89 years	34	65.222	181.826	110.68276648	0.261195544	0.1237189437

### ROCHE Elecsys® : females

Age groups	n	2.5th percentile	97.5th percentile	Median (M)	Standard deviation (SD)	Lambda (L)
18-20 years	42	162.210	419.334	283.65972621	0.232267583	0.7609204384
21-23 years	55	149.036	383.807	257.78396334	0.2332866483	0.6816307996
24-26 years	45	137.696	353.639	235.79861178	0.234310193	0.6043233934
27-29 years	48	128.269	328.900	217.70150259	0.2353382405	0.5303917489
30-39 years	47	111.657	286.361	186.42699201	0.2377546469	0.3780661887
40-49 years	50	93.604	241.907	154.43366564	0.241249812	0.2307529513
50-59 years	54	77.611	203.125	128.2588036	0.2447961633	0.184193248
60-69 years	48	65.653	174.413	109.68489934	0.2483943279	0.2073827132
70-89 years	50	58.684	159.517	99.678551331	0.2538905075	0.2389177599