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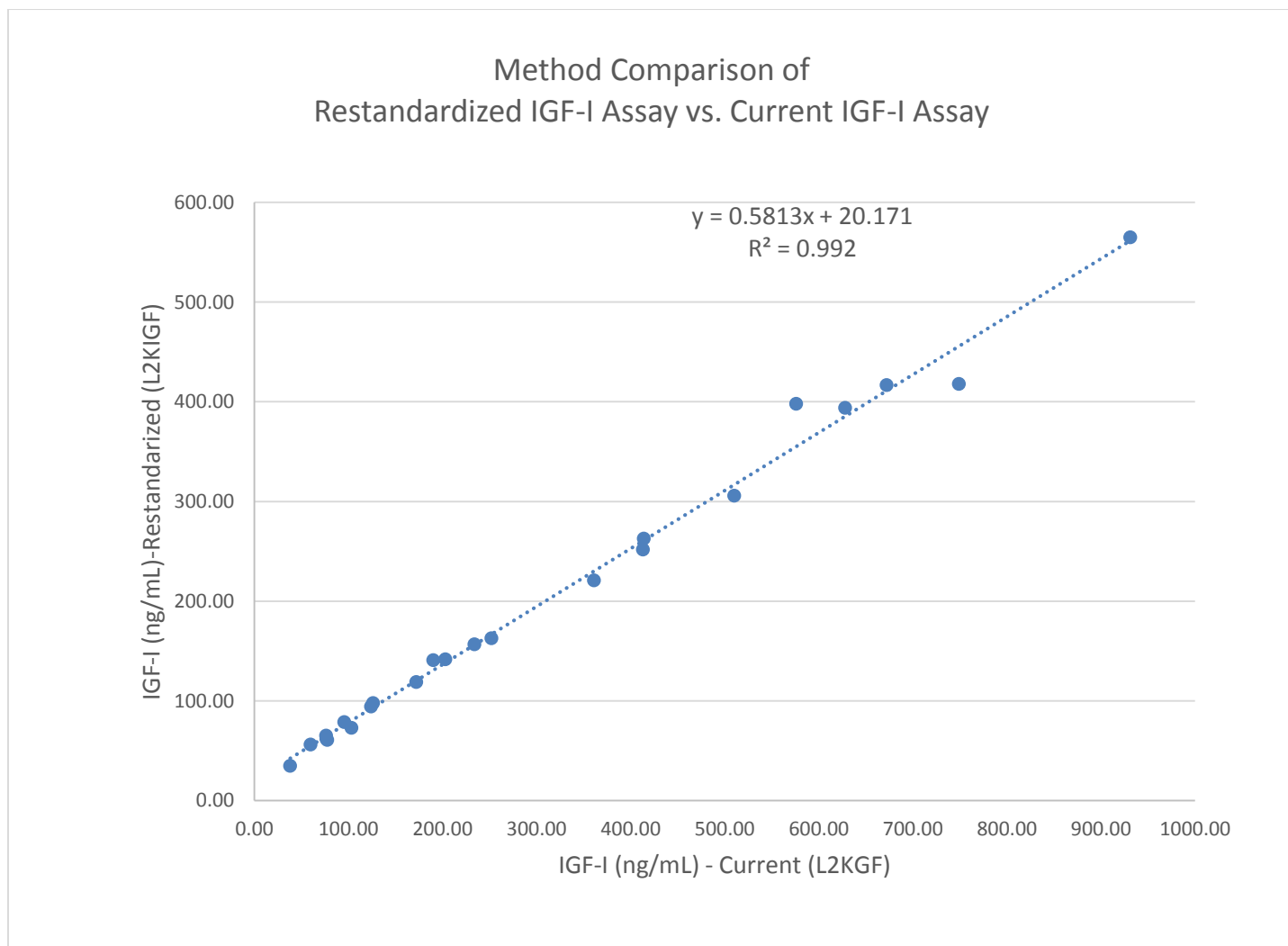
THE MEDICAL FOUNDATION

Insulin-Like Growth Factor-I (IGF-I): Change in Reference Range and Assay Restandardization

Effective December 1, 2016, The Medical Foundation will offer an IGF-I assay that is standardized to the WHO 1st International Standard (IS) Code 02/254.

Due to differences in calibration, the IGF-I values generated using the restandardized assay are expected to be much lower than the values generated before the assay restandardization. Therefore, the IGF-I values reported before 12/1/2016 cannot be compared to those reported after 12/1/2016. However, it is possible to use the following equation generated from our correlation study to estimate the old IGF-I values based on the new values.

$$\text{IGF-I}_{\text{before 12/1/2016}} = (\text{IGF-I}_{\text{after 12/1/2016}} - 20.171) / 0.5813$$



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The new and old reference intervals for IGF-I are listed below. Please note the significant difference between new and old intervals.

IGF-I Reference Ranges before 12/1/2016, ng/mL			IGF-I Reference Ranges on & after 12/1/2016, ng/mL		
Pediatric Reference Ranges			Pediatric Reference Ranges		
Age	Reference Range (ng/mL)		Age (yr.)	Gender	Reference Range (ng/mL)
1-7 days	0-26		0 to 3	Male	< 15 – 189
8-15 days	0 – 41		4 to 6	Male	47 – 231
16 days – 1 year	55 – 327		7 to 9	Male	55 – 222
2 year	51 – 303		10 to 11	Male	95 – 315
3 years	49 – 289		12 to 13	Male	95 – 460
4 years	49 – 283		14 to 15	Male	211 – 512
5 years	50 – 286		16 to 18	Male	57 – 426
6 years	52 – 297		0 to 3	Female	< 15 – 272
7 years	57 – 316		4 to 6	Female	55 – 248
8 years	64-345		7 to 9	Female	80 – 233
9 years	74-388		10 to 11	Female	96 – 545
10 years	88-452		12 to 13	Female	147 – 549
11 years	111-551		14 to 15	Female	208 – 444
12 years	143-693		16 to 18	Female	176 – 429
13 years	183-850		Adult Reference Ranges		
14 years	220-972		Age (yr.)	Reference Range (ng/mL)	
15 years	237-996		19 to 21	105 – 346	
16 years	226-903		22 to 24	107 – 367	
17 years	193-731		25 to 29	88 – 537	
18 years	163-584		30 to 34	41 – 246	
19 years	141 – 483		35 to 39	57 – 241	
20 years	127 – 424		40 to 44	43 – 209	
Adult Reference Ranges			45 to 49	74 – 196	
Age (yr.)	Reference Range (ng/mL)		50 to 54	55 – 248	
21 – 25	116 – 358 ng/mL		55 to 59	36 – 200	
26 – 30	117 – 329 ng/mL		60 to 64	51 – 187	
31 – 35	115 – 307 ng/mL		65 to 69	37 – 219	
36 – 40	109 – 284 ng/mL		70 to 79	24 – 200	
41 – 45	101 – 267 ng/mL		80 to 90	17 – 323	
46 – 50	94 – 252 ng/mL		Tanner Stage Reference Range		
51 – 55	87 – 238 ng/mL		Tanner Stage	Gender	Reference Range (ng/mL)
56 – 60	81 – 225 ng/mL		1	Male	53 – 256
61 – 65	75 – 212 ng/mL		2	Male	96 – 462
66 – 70	69 – 200 ng/mL		3	Male	197 – 533
71 – 75	64 – 188 ng/mL		4	Male	165 – 476
76 – 80	59 – 177 ng/mL		5	Male	159 – 537
81 – 85	55 – 166 ng/mL		1	Female	44 – 472
Tanner Stage Reference Range			2	Female	116 – 449
Tanner Stage	Gender	Reference Range (ng/mL)	3	Female	182 – 481
1	Male	63 - 279	4	Female	186 – 461
2	Male	75 - 420	5	Female	146 – 431
3	Male	94 - 765			
4	Male	192 - 861			
5	Male	171 - 814			
1	Female	49 - 342			
2	Female	115 - 428			
3	Female	145 - 760			
4	Female	244 - 787			
5	Female	143 - 859			

Please direct any questions, or comments regarding this notice to Paul Moorman (pmoorman@sbfm.org) at (574) 234-4176 extension 1415, Qing Li, Ph.D. (qli@sbfm.org) at (574) 234-4176 extension 1584 or call The Medical Foundation, (574) 234-4176 or (800) 544-0925.

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