

Supplemental Materials from:

**Classification of thyroid dysfunction in pregnant women differs by analytical method and type of thyroid function test**

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**Supplemental Table 1** Number and range of outliers excluded from each stratification using Tukey's inner fences in the establishment of reference ranges.

Pregnancy week	TSH (mIU/l)				Total T4 (nmol/l)				Total T3 (nmol/l)			
	Lower <sup>a</sup>		Upper <sup>b</sup>		Lower <sup>a</sup>		Upper <sup>b</sup>		Lower <sup>a</sup>		Upper <sup>b</sup>	
	n	range	n	range	n	range	n	range	n	range	n	range
4-6	<3 <sup>c</sup>	-	3	4.21-4.59	<3 <sup>c</sup>	-	<3 <sup>c</sup>	-	0	-	0	-
7	0	-	<3 <sup>c</sup>	-	<3 <sup>c</sup>	-	3	176-182	<3 <sup>c</sup>	-	<3 <sup>c</sup>	-
8	8	0.014-0.19	4	4.99-19.1	<3 <sup>c</sup>	-	<3 <sup>c</sup>	-	<3 <sup>c</sup>	-	<3 <sup>c</sup>	-
9	13	0.007-0.06	13	3.95-5.78	7	65-78	8	212-273	4	1.34-1.40	5	3.97-4.45
10	32	0.007-0.05	11	4.37-24.1	15	67-83	14	213-320	9	1.10-1.45	12	3.85-4.42
11	11	0.007-0.04	6	4.87-9.74	6	48-81	6	206-280	5	1.18-1.45	<3 <sup>c</sup>	-
12	0	-	3	3.97-5.27	4	71-78	3	261-320	<3 <sup>c</sup>	-	3	4.48-5.71
13	0	-	3	4.06-4.41	4	78-88	<3 <sup>c</sup>	-	0	-	0	-
14	<3 <sup>c</sup>	-	0	-	0	-	0	-	0	-	0	-

  

Pregnancy week	Free T4 (pmol/l)				Free T4-index (nmol/l)				Free T3 (pmol/l)			
	Lower <sup>a</sup>		Upper <sup>b</sup>		Lower <sup>a</sup>		Upper <sup>b</sup>		Lower <sup>a</sup>		Upper <sup>b</sup>	
	n	range	n	range	n	range	n	range	n	range	n	range
4-6	3	11.5-12.7	<3 <sup>c</sup>	-	<3 <sup>c</sup>	-	<3 <sup>c</sup>	-	0	-	0	-
7	0	-	<3 <sup>c</sup>	-	<3 <sup>c</sup>	-	0	-	<3 <sup>c</sup>	-	<3 <sup>c</sup>	-
8	<3 <sup>c</sup>	-	4	22.7-28.5	<3 <sup>c</sup>	-	3	171-208	6	3.61-3.92	4	6.89-9.21
9	9	11.4-12.4	5	25.8-45.5	8	67-74	10	198-350	9	3.49-3.91	8	7.41-13.1
10	13	10.7-12.6	14	24.3-34.0	18	64-78	16	195-311	10	3.49-3.85	8	7.55-10.5
11	7	11.6-12.7	7	23.5-34.3	5	52-75	6	206-307	7	3.12-3.74	8	7.13-11.6
12	6	12.1-13.0	4	27.9-51.6	3	71-76	3	304-3200	<3 <sup>c</sup>	-	4	8.53-17.8
13	0	-	3	26.1-32.9	<3 <sup>c</sup>	-	<3 <sup>c</sup>	-	<3 <sup>c</sup>	-	3	7.63-9.2
14	0	-	0	-	0	-	0	-	0	-	<3 <sup>c</sup>	-

Abbreviations: TSH; thyrotropin, T4; thyroxine, T3; 3,5,3'-triiodothyronine.

<sup>a</sup>Samples with a concentration less than the 25th percentile - (1.5 x the interquartile range).

<sup>b</sup>Samples with concentrations above the 75th percentile + (1.5 x the interquartile range).

<sup>c</sup>Subgroups with less than three cases were reported as < 3 and the range could not be reported according to the regulations for the use of register-based data.

**Supplemental Table 2** Pregnancy week-specific reference ranges for maternal thyroid function tests using Method A (Cobas 8000, Roche Diagnostics) in the reference cohort of 4,612 pregnant women when outliers were identified and excluded using Tukey's outer fences.

Pregnancy week	TSH (mIU/l)					Total T4 (nmol/l)					Total T3 (nmol/l)				
	n	p2.5	95% CI <sup>a</sup>	p97.5	95% CI <sup>a</sup>	n	p2.5	95% CI <sup>a</sup>	p97.5	95% CI <sup>a</sup>	n	p2.5	95% CI <sup>a</sup>	p97.5	95% CI <sup>a</sup>
4-6	73	0.59	0.03-0.84	4.41	3.07-4.59	73	73	62-84	180	132-210	73	1.60	1.58-1.75	2.98	2.79-3.04
7	116	0.40	0.33-0.59	3.41	3.15-4.81	116	83	75-89	176	150-182	116	1.55	1.43-1.63	3.00	2.60-4.50
8	349 <sup>b</sup>	0.23	0.19-0.28	3.39	3.14-4.60	351	80	76-85	163	154-170	351	1.54	1.42-1.60	2.95	2.88-3.17
9	1,210	0.15	0.10-0.20	3.34	3.23-3.61	1,210	86	83-89	183	178-194	1,210	1.62	1.56-1.66	3.35	3.27-3.54
10	1,572 <sup>b</sup>	0.06	0.04-0.09	3.29	3.07-3.50	1,573	92	90-93	186	183-198	1,573	1.67	1.60-1.70	3.36	3.29-3.42
11	804 <sup>b</sup>	0.10	0.05-0.13	3.55	3.14-3.72	803 <sup>b</sup>	93	90-95	184	179-191	805	1.66	1.60-1.73	3.55	3.46-3.75
12	268	0.02	0.01-0.04	3.10	2.76-4.11	268	97	73-100	198	190-284	268	1.80	1.60-1.82	3.61	3.39-4.59
13	148	0.01	0.01-0.05	3.43	2.64-4.40	148	87	78-100	223	197-269	148	1.73	1.63-1.91	3.98	3.53-4.13
14	68	0.12	0.01-0.33	3.70	2.79-4.08	68	110	109-117	208	200-209	68	1.90	1.68-2.18	3.89	3.64-3.90

  

Pregnancy week	Free T4 (pmol/l)					Free T4-index (nmol/l)					Free T3 (pmol/l)				
	n	p2.5	95% CI <sup>a</sup>	p97.5	95% CI <sup>a</sup>	n	p2.5	95% CI <sup>a</sup>	p97.5	95% CI <sup>a</sup>	n	p2.5	95% CI <sup>a</sup>	p97.5	95% CI <sup>a</sup>
4-6	73	12.5	11.5-13.4	23.7	20.0-35.8	73	71	69-83	177	128-221	73	4.35	4.26-4.54	6.65	6.22-6.84
7	116	13.0	12.7-13.9	21.4	20.4-23.3	116	80	68-85	154	148-170	116	4.23	3.67-4.34	6.31	5.97-6.81
8	349 <sup>b</sup>	13.3	12.9-13.5	20.8	20.0-22.0	350 <sup>b</sup>	80	72-81	153	144-166	350 <sup>b</sup>	4.07	3.85-4.20	6.33	6.16-6.77
9	1,209 <sup>b</sup>	13.4	13.1-13.6	21.9	21.3-22.4	1,210	81	79-83	167	159-174	1,209 <sup>b</sup>	4.12	4.06-4.18	6.63	6.50-6.80
10	1,573	13.1	13.0-13.5	21.9	21.5-22.5	1,573	83	82-84	172	165-180	1,573	4.11	4.04-4.16	6.53	6.38-6.64
11	804 <sup>b</sup>	13.3	13.0-13.6	21.2	20.5-22.1	804 <sup>b</sup>	85	82-86	170	161-177	803 <sup>b</sup>	4.01	3.92-4.07	6.45	6.25-6.61
12	268	13.1	12.8-13.5	21.5	20.4-37.0	268	82	75-87	175	161-362	268	4.05	3.93-4.15	6.84	6.31-12.1
13	148	13.2	13.1-13.4	24.5	21.2-32.8	148	79	76-83	201	164-308	148	3.93	3.52-4.19	7.30	6.32-9.22
14	68	13.0	12.5-13.5	20.7	19.6-21.9	68	86	83-93	175	164-191	68	3.75	3.36-4.11	6.33	6.12-6.45

Abbreviations: TSH; thyrotropin, T4; thyroxine, T3; 3,5,3'-triiodothyronine, p2.5; 2.5 percentile, p97.5; 97.5 percentile, CI; confidence interval.

<sup>a</sup>Lower and upper limit of the confidence interval held at minimum and maximum of the sample in pregnancy week 4-6, 7, and 14.

<sup>b</sup>Outlier excluded because the sample concentration was less than (the 25th percentile - (3 x the interquartile range)) or above (the 75th percentile + (3 x the interquartile range)). All groups of outliers excluded were < 3 and the range of the thyroid function test results could not be reported according to the regulations for the use of register-based data.

**Supplemental Table 3** Pregnancy week-specific reference ranges for maternal thyroid function tests using Method A (Cobas 8000, Roche Diagnostics) in the reference cohort of 4,612 pregnant women when outliers were not excluded.

Pregnancy week	TSH (mIU/l)					Total T4 (nmol/l)					Total T3 (nmol/l)				
	n	p2.5	95% CI <sup>a</sup>	p97.5	95% CI <sup>a</sup>	n	p2.5	95% CI <sup>a</sup>	p97.5	95% CI <sup>a</sup>	n	p2.5	95% CI <sup>a</sup>	p97.5	95% CI <sup>a</sup>
4-6	73	0.59	0.03-0.84	4.41	3.07-4.59	73	73	62-84	180	132-210	73	1.60	1.58-1.75	2.98	2.79-3.04
7	116	0.40	0.33-0.59	3.41	3.15-4.81	116	83	75-89	176	150-182	116	1.55	1.43-1.63	3.00	2.60-4.50
8	351	0.22	0.13-0.26	3.46	3.17-4.98	351	80	76-85	163	154-170	351	1.54	1.42-1.60	2.95	2.88-3.17
9	1,210	0.15	0.10-0.20	3.34	3.23-3.61	1,210	86	83-89	183	178-194	1,210	1.62	1.56-1.66	3.35	3.27-3.54
10	1,573	0.06	0.04-0.09	3.29	3.09-3.51	1,573	92	90-93	186	183-198	1,573	1.67	1.60-1.70	3.36	3.29-3.42
11	805	0.10	0.05-0.13	3.59	3.15-3.72	805	92	90-95	184	180-194	805	1.66	1.60-1.73	3.55	3.46-3.75
12	268	0.02	0.01-0.04	3.10	2.76-4.11	268	97	73-100	198	190-284	268	1.80	1.60-1.82	3.61	3.39-4.59
13	148	0.01	0.01-0.05	3.43	2.64-4.40	148	87	78-100	223	197-269	148	1.73	1.63-1.91	3.98	3.53-4.13
14	68	0.12	0.01-0.33	3.70	2.79-4.08	68	110	109-117	208	200-209	68	1.90	1.68-2.18	3.89	3.64-3.90

  

Pregnancy week	Free T4 (pmol/l)					Free T4-index (nmol/l)					Free T3 (pmol/l)				
	n	p2.5	95% CI <sup>a</sup>	p97.5	95% CI <sup>a</sup>	n	p2.5	95% CI <sup>a</sup>	p97.5	95% CI <sup>a</sup>	n	p2.5	95% CI <sup>a</sup>	p97.5	95% CI <sup>a</sup>
4-6	73	12.5	11.5-13.4	23.7	20.0-35.8	73	71	69-83	177	128-221	73	4.35	4.26-4.54	6.65	6.22-6.84
7	116	13.0	12.7-13.9	21.4	20.4-23.3	116	80	68-85	154	148-170	116	4.23	3.67-4.34	6.31	5.97-6.81
8	351	13.2	12.6-13.4	21.0	20.0-22.7	351	78	72-81	153	144-166	351	4.07	3.85-4.20	6.45	6.17-6.89
9	1,210	13.4	13.1-13.6	21.9	21.4-22.4	1,210	81	79-83	167	159-174	1,210	4.12	4.06-4.18	6.63	6.51-6.82
10	1,573	13.1	13.0-13.5	21.9	21.5-22.5	1,573	83	82-84	172	165-180	1,573	4.11	4.04-4.16	6.53	6.38-6.64
11	805	13.3	13.0-13.6	21.3	20.5-22.2	805	84	82-86	170	161-177	805	4.01	3.91-4.07	6.48	6.28-6.62
12	268	13.1	12.8-13.5	21.5	20.4-37.0	268	82	75-87	175	161-362	268	4.05	3.93-4.15	6.84	6.31-12.1
13	148	13.2	13.1-13.4	24.5	21.2-32.8	148	79	76-83	201	164-308	148	3.93	3.52-4.19	7.30	6.32-9.22
14	68	13.0	12.5-13.5	20.7	19.6-21.9	68	86	83-93	175	164-191	68	3.75	3.36-4.11	6.33	6.12-6.45

Abbreviations: TSH; thyrotropin, T4; thyroxine, T3; 3,5,3'-triiodothyronine, p2.5; 2.5 percentile, p97.5; 97.5 percentile, CI; confidence interval.

<sup>a</sup>Lower and upper limit of the confidence interval held at minimum and maximum of the sample in pregnancy week 4-6, 7, and 14.

**Supplemental Table 4** Pregnancy week-specific reference ranges for maternal thyroid function tests using Method A (Cobas 8000, Roche Diagnostics) in the reference cohort of 4,245 pregnant women who terminated the pregnancy with live birth.

Pregnancy week	TSH (mIU/l)					Total T4 (nmol/l)					Total T3 (nmol/l)				
	n <sup>a</sup>	p2.5	95% CI <sup>b</sup>	p97.5	95% CI <sup>b</sup>	n <sup>a</sup>	p2.5	95% CI <sup>b</sup>	p97.5	95% CI <sup>b</sup>	n <sup>a</sup>	p2.5	95% CI <sup>b</sup>	p97.5	95% CI <sup>b</sup>
4-6	37	0.76	0.76-0.98	4.59	2.94-4.59	36	89	89-91	174	128-174	37	1.71	1.71-1.77	2.97	2.81-2.97
7	77	0.57	0.48-0.74	3.41	3.16-3.57	77	83	82-89	150	138-150	76	1.63	1.63-1.67	2.78	2.57-2.96
8	287	0.42	0.32-0.55	3.16	2.95-3.45	300	80	77-87	158	152-165	298	1.56	1.45-1.63	2.94	2.87-3.15
9	1,103	0.21	0.16-0.23	3.15	2.97-3.28	1,113	89	86-91	179	175-183	1,122	1.64	1.60-1.69	3.31	3.22-3.47
10	1,460	0.16	0.13-0.19	3.08	2.86-3.28	1,479	94	93-96	183	178-184	1,487	1.69	1.66-1.73	3.27	3.21-3.33
11	738	0.13	0.10-0.17	3.17	2.90-3.32	748	95	92-97	183	178-188	754	1.72	1.65-1.79	3.55	3.45-3.74
12	237	0.02	0.01-0.04	2.88	2.62-3.30	234	99	97-104	194	186-199	236	1.80	1.62-1.87	3.45	3.32-3.78
13	130	0.03	0.01-0.09	2.70	2.34-3.19	130	95	88-104	222	197-225	130	1.75	1.63-1.92	3.58	3.33-3.97
14	64	0.11	0.01-0.31	3.09	2.44-3.22	64	109	109-117	208	201-209	64	1.87	1.68-2.21	3.89	3.65-3.90

  

Pregnancy week	Free T4 (pmol/l)					Free T4-index (nmol/l)					Free T3 (pmol/l)				
	n <sup>a</sup>	p2.5	95% CI <sup>b</sup>	p97.5	95% CI <sup>b</sup>	n <sup>a</sup>	p2.5	95% CI <sup>b</sup>	p97.5	95% CI <sup>b</sup>	n <sup>a</sup>	p2.5	95% CI <sup>b</sup>	p97.5	95% CI <sup>b</sup>
4-6	36	12.7	12.7-14.4	19.8	19.1-19.8	35	87	87-90	128	119-128	37	4.59	4.59-4.98	6.62	6.12-6.62
7	78	13.0	12.9-14.1	21.4	20.1-22.2	78	80	80-86	151	141-153	80	4.24	4.13-4.51	6.26	5.89-6.29
8	297	13.3	13.0-13.6	20.3	19.9-21.3	296	79	72-82	146	141-152	294	4.17	4.07-4.24	6.22	6.07-6.46
9	1,117	13.6	13.3-13.8	21.8	21.2-22.3	1,112	83	81-85	160	157-166	1,113	4.16	4.11-4.21	6.56	6.42-6.66
10	1,478	13.6	13.2-13.6	21.5	21.1-21.9	1,474	85	84-86	165	161-171	1,489	4.14	4.10-4.19	6.41	6.31-6.55
11	744	13.4	13.3-13.8	21.0	20.4-21.4	746	85	83-87	166	159-173	742	4.07	4.01-4.12	6.34	6.17-6.51
12	236	13.2	12.9-13.6	20.6	20.2-21.7	240	81	75-87	173	158-288	235	4.07	3.98-4.25	6.49	6.19-7.24
13	129	13.2	13.1-13.5	21.9	20.8-24.0	130	80	79-83	184	160-211	126	3.97	3.93-4.22	6.31	5.90-6.59
14	64	12.9	12.5-13.5	20.9	19.7-21.9	64	86	83-93	177	165-191	63	3.97	3.93-4.19	6.35	6.14-6.45

Abbreviations: TSH; thyrotropin, T4; thyroxine, T3; 3,5,3'-triiodothyronine, p2.5; 2.5 percentile, p97.5; 97.5 percentile, CI; confidence interval.

<sup>a</sup>Number of individuals in each group after the exclusion of outliers using Tukey's inner fences.

<sup>b</sup>Lower and upper limit of the confidence interval held at minimum and maximum of the sample in pregnancy week 4-6, 7, 13, and 14.

**Supplemental Table 5** Classification of maternal thyroid function by measurements of thyrotropin (TSH) and free thyroxine (T4) in 6,265 pregnant women using different methods and method- and pregnancy interval- or trimester-specific reference ranges.

	Method A <sup>a</sup>		Method B <sup>b</sup>		Method A and B <sup>c</sup>			95% CI
	n	% <sup>d</sup>	n	% <sup>d</sup>	n	% <sup>d</sup>	κ	
<b>Interval-specific reference ranges<sup>e</sup></b>								
Classification by TSH or free T4								
<b>Abnormal TSH</b>								
Above p97.5	364	5.8	359	5.7	312	5.0	0.86	0.83-0.88
Below p2.5	248	4.0	240	3.8	225	3.6	0.92	0.89-0.95
<b>Abnormal free T4</b>								
Above p97.5	210	3.3	194	3.1	114	1.8	0.55	0.49-0.61
Below p2.5	290	4.6	230	3.7	104	1.7	0.37	0.32-0.43
Classification by TSH and free T4								
<b>Hyperthyroidism</b>								
Overt	110	1.7	86	1.4	72	1.1	0.73	0.66-0.80
Subclinical	138	2.2	154	2.5	110	1.8	0.75	0.69-0.80
<b>Hypothyroidism</b>								
Overt	75	1.2	54	0.9	36	0.6	0.55	0.45-0.66
Subclinical	289	4.6	305	4.9	225	3.6	0.75	0.71-0.79
<b>Isolated abnormal free T4</b>								
Hyperthyroxinemia	100	1.6	108	1.7	36	0.6	0.34	0.25-0.42
Hypothyroxinemia	215	3.4	176	2.8	64	1.0	0.31	0.25-0.37
<b>Trimester-specific reference ranges<sup>f</sup></b>								
Classification by TSH or free T4								
<b>Abnormal TSH</b>								
Above p97.5	364	5.8	354	5.7	310	5.0	0.86	0.83-0.88
Below p2.5	275	4.4	289	4.6	266	4.2	0.94	0.92-0.96
<b>Abnormal free T4</b>								
Above p97.5	199	3.2	209	3.3	118	1.9	0.56	0.51-0.62
Below p2.5	289	4.6	242	3.9	112	1.8	0.40	0.34-0.45
Classification by TSH and free T4								
<b>Hyperthyroidism</b>								
Overt	110	1.8	94	1.5	78	1.3	0.76	0.70-0.83
Subclinical	165	2.6	195	3.1	144	2.3	0.79	0.75-0.84
<b>Hypothyroidism</b>								
Overt	75	1.2	54	0.9	37	0.6	0.57	0.47-0.67
Subclinical	289	4.6	300	4.8	224	3.6	0.75	0.71-0.79
<b>Isolated abnormal free T4</b>								
Hyperthyroxinemia	89	1.4	115	1.8	37	0.6	0.35	0.27-0.44
Hypothyroxinemia	214	3.4	188	3.0	72	1.1	0.34	0.28-0.40

Abbreviations: p2.5; 2.5 percentile; p97; 97.5 percentile; κ; Cohen's kappa with 95% confidence interval (CI).

<sup>a</sup>Method A: Cobas 8000 (Roche Diagnostics).

<sup>b</sup>Method B: ADVIA Centaur XP (Siemens Healthineers).

<sup>c</sup>Number of individuals classified as such with both methods (agreement).

<sup>d</sup>Percentage of all within the cohort investigated.

<sup>e</sup>Reference ranges established within intervals of pregnancy week 4-8, 9-11, and 12-14.

<sup>f</sup>Reference ranges established within first trimester of pregnancy; pregnancy week 4-12.

**Supplemental Table 6** Classification of maternal thyroid function by different measures of maternal thyroxine (T4) using Method A (Cobas 8000, Roche Diagnostics) in 6,265 pregnant women and method- and pregnancy interval-specific reference ranges (week 4-8, 9-11, and 12-14).

	Total T4		Free T4-index		Total T4 and free T4-index <sup>a</sup>				Free T4-index and free T4 <sup>a</sup>				Total T4 and free T4 <sup>a</sup>			
	n	% <sup>b</sup>	n	% <sup>b</sup>	n	% <sup>b</sup>	κ	95% CI	n	% <sup>b</sup>	κ	95% CI	n	% <sup>b</sup>	κ	95% CI
Classification by T4																
<b>Abnormal T4</b>																
Above p97.5	212	3.4	216	3.5	142	2.3	0.65	0.60-0.71	128	2.0	0.59	0.53-0.64	97	1.6	0.44	0.38-0.50
Below p2.5	239	3.8	245	3.9	160	2.5	0.65	0.60-0.70	129	2.1	0.46	0.41-0.51	78	1.2	0.26	0.21-0.32
Classification by TSH and T4																
<b>Hyperthyroidism</b>																
Overt	74	1.2	93	1.5	64	1.0	0.76	0.69-0.84	76	1.2	0.75	0.68-0.81	57	0.9	0.61	0.53-0.70
Subclinical	172	2.8	154	2.5	143	2.3	0.87	0.84-0.91	120	1.9	0.82	0.77-0.87	119	1.9	0.76	0.71-0.82
<b>Hypothyroidism</b>																
Overt	36	0.6	52	0.8	33	0.5	0.75	0.65-0.85	39	0.6	0.61	0.51-0.71	22	0.4	0.39	0.28-0.51
Subclinical	326	5.2	312	5.0	307	4.9	0.96	0.95-0.98	276	4.4	0.91	0.89-0.94	273	4.3	0.88	0.86-0.91
<b>Isolated abnormal T4</b>																
Hyperthyroxinemia	136	2.2	123	2.0	78	1.2	0.59	0.52-0.67	52	0.8	0.46	0.38-0.54	40	0.6	0.33	0.25-0.41
Hypothyroxinemia	201	3.2	192	3.1	126	2.1	0.63	0.57-0.69	90	1.5	0.42	0.36-0.49	56	0.9	0.24	0.19-0.30

Abbreviations: p2.5; 2.5 percentile; p97.5; 97.5 percentile; κ; Cohen's kappa with 95% confidence interval (CI)

<sup>a</sup>Number of individuals classified as such with both measures of T4 (agreement).

<sup>b</sup>Percentage of all within the cohort investigated.

**Supplemental Table 7** Classification of maternal thyroid function by different measures of maternal thyroxine (T4) using Method A (Cobas 8000, Roche Diagnostics) in 6,265 pregnant women and method- and pregnancy trimester-specific reference ranges (week 4-12).

	Total T4		Free T4-index		Total T4 and free T4-index <sup>a</sup>				Free T4-index and free T4 <sup>a</sup>				Total T4 and free T4 <sup>a</sup>			
	n	% <sup>b</sup>	n	% <sup>b</sup>	n	% <sup>b</sup>	κ	95% CI	n	% <sup>b</sup>	κ	95% CI	n	% <sup>b</sup>	κ	95% CI
Classification by T4																
<b>Abnormal T4</b>																
Above p97.5	232	3.7	224	3.6	155	2.5	0.67	0.62-0.72	124	2.0	0.57	0.52-0.63	97	1.5	0.43	0.37-0.49
Below p2.5	247	3.9	241	3.8	168	2.7	0.68	0.63-0.72	124	2.0	0.45	0.39-0.50	85	1.4	0.29	0.23-0.34
Classification by TSH and T4																
<b>Hyperthyroidism</b>																
Overt	82	1.3	99	1.6	73	1.2	0.80	0.74-0.87	76	1.2	0.72	0.65-0.79	61	1.0	0.63	0.55-0.71
Subclinical	191	3.0	175	2.8	165	2.6	0.90	0.87-0.93	141	2.3	0.83	0.78-0.87	142	2.2	0.79	0.75-0.84
<b>Hypothyroidism</b>																
Overt	41	0.7	53	0.9	36	0.6	0.76	0.67-0.86	40	0.6	0.62	0.52-0.72	27	0.4	0.46	0.35-0.57
Subclinical	320	5.1	311	5.0	303	4.8	0.96	0.94-0.98	276	4.4	0.92	0.89-0.94	272	4.4	0.89	0.86-0.92
<b>Isolated abnormal T4</b>																
Hyperthyroxinemia	147	2.4	125	2.0	82	1.3	0.59	0.52-0.66	48	0.8	0.44	0.36-0.52	36	0.6	0.29	0.22-0.37
Hypothyroxinemia	204	3.3	187	3.0	131	2.1	0.66	0.60-0.72	84	1.3	0.40	0.34-0.46	58	0.9	0.25	0.20-0.31

Abbreviations: p2.5; 2.5 percentile; p97.5; 97.5 percentile; κ; Cohen's kappa with 95% confidence interval (CI)

<sup>a</sup>Number of individuals classified as such with both measures of T4 (agreement).

<sup>b</sup>Percentage of all within the cohort investigated.



**Supplemental Table 8** Classification of maternal thyroid function by total 3,5,3'-triiodothyronine (T3) and free T3 in 6,265 pregnant women using Method A (Cobas 8000, Roche Diagnostics) and method- and pregnancy interval- or trimester-specific reference ranges.

	Total T3		Free T3		Total T3 and free T3 <sup>a</sup>			
	n	% <sup>b</sup>	n	% <sup>b</sup>	n	% <sup>b</sup>	κ	95% CI
<b>Interval-specific reference ranges<sup>c</sup></b>								
<b>Abnormal T3</b>								
Above p97.5	201	3.2	200	3.2	100	1.6	0.48	0.42-0.54
Below p2.5	190	3.0	262	4.2	84	1.3	0.35	0.29-0.41
<b>Trimester-specific reference ranges<sup>d</sup></b>								
<b>Abnormal T3</b>								
Above p97.5	223	3.5	198	3.2	104	1.7	0.48	0.42-0.54
Below p2.5	199	3.2	258	4.1	79	1.2	0.32	0.26-0.38

Abbreviations: p2.5; 2.5 percentile, p97.5; 97.5 percentile, κ; Cohen's kappa with 95% confidence interval (CI)

<sup>a</sup>Number of individuals classified as such with both measures of T3 (agreement).

<sup>b</sup>Percentage of all within the cohort investigated.

<sup>c</sup>Reference ranges established within intervals of pregnancy week 4-8, 9-11, and 12-14.

<sup>d</sup>Reference ranges established within first trimester of pregnancy; pregnancy week 4-12.