

Supplemental Table 1. Frequency of calcium testing and incidence of primary hyperparathyroidism per 100,000 person-years (crude, age-adjusted) by year, 1995-2010

		Percent enrollees with at least one calcium test									
	Race	N	1995	1996	1997	1998	1999	2000	2001	2002	2003
Women	Asian	122,865	6.2	6.7	6.8	7.5	7.6	7.5	8.2	8.5	9.1
	Black	233,195	9.1	10.2	10.7	11.1	11.6	11.2	11.6	12.0	12.6
	Hispanic	333,001	6.0	6.8	6.5	6.6	6.6	6.5	6.9	7.1	7.4
	Other	206,860	3.1	3.3	3.2	3.0	3.1	3.0	3.7	4.1	4.2
	White	781,793	9.2	9.9	9.8	10.1	10.4	10.2	12.0	13.1	13.4
	All races		6.8	7.3	7.2	7.2	7.4	7.2	8.2	8.7	9.0
Men	Asian	71,595	6.0	7.4	7.6	7.9	7.8	8.0	8.2	7.7	9.0
	Black	131,363	8.6	9.5	10.0	10.6	11.0	11.0	10.9	11.0	11.5
	Hispanic	226,493	5.5	6.2	7.1	5.8	5.8	5.6	5.6	5.4	5.6
	Other	153,749	2.1	2.0	1.9	1.7	1.8	1.8	1.9	2.0	2.1
	White	513,228	8.0	8.6	8.9	9.1	9.4	9.1	9.1	9.6	10.0
	All races		5.3	5.7	5.7	5.4	5.6	5.5	5.5	5.7	6.0
Incidence rates											
Women	Classic	4,988	32.0, 36.0	37.8, 37.7	32.0, 31.9	29.7, 32.1	22.0, 21.2	19.5, 20.1	25.8, 27.5	43.6, 46.3	37.8, 29.7
	Non-clas.	5,148	23.1, 23.9	24.0, 28.5	27.1, 33.1	24.7, 27.0	10.6, 12.6	14.8, 14.9	35.8, 34.0	64.0, 72.2	46.4, 48.0
	Possible	284	5.2, 7.7	4.2, 5.4	2.4, 3.2	2.6, 3.3	2.0, 2.5	1.5, 1.6	1.5, 1.5	1.6, 1.7	0.9, 1.0
	Total	10,420	60.3, 67.6	66.0, 71.6	61.5, 68.2	57.0, 62.4	34.6, 36.3	35.8, 36.6	63.1, 63.0	109.2, 120.2	85.1, 78.7
Men	Classic	1,759	18.1, 14.9	21.0, 20.9	14.9, 14.5	11.1, 11.8	11.1, 11.1	10.2, 10.8	12.8, 12.0	13.3, 14.2	10.3, 10.2
	Non-clas.	1,470	9.8, 9.6	15.1, 15.7	11.3, 11.8	9.3, 9.6	8.5, 7.1	8.6, 8.9	6.7, 6.7	15.6, 15.8	11.2, 11.6
	Possible	165	3.0, 3.4	2.9, 3.3	3.0, 2.9	2.3, 2.2	1.1, 1.0	0.8, 0.7	0.5, 0.5	0.8, 0.8	0.6, 0.7
	Total	3,394	30.9, 27.9	39.0, 35.6	29.2, 29.2	22.7, 23.6	20.7, 19.2	19.6, 20.4	20.0, 19.2	29.7, 30.8	27.5, 22.5

Supplemental Table 1 (cont'd). Frequency of calcium testing and incidence of primary hyperparathyroidism per 100,000 person-years (crude, age-adjusted) by year, 1995-2010

		Percent enrollees with at least one calcium lab value								
Sex	Race	2004	2005	2006	2007	2008	2009	2010	Mean (All years)	
Women	Asian	9.6	10.0	10.8	10.7	11.1	12.3	12.8	9.1	
	Black	13.5	14.2	15.0	14.4	15.3	17.1	18.3	13.0	
	Hispanic	8.0	8.2	8.5	8.3	9.0	10.1	11.2	7.7	
	Other	4.6	4.6	5.0	4.9	5.0	5.7	6.0	4.2	
	White	13.9	14.3	15.0	14.8	15.5	17.0	17.7	12.9	
	All races	9.6	9.9	10.4	10.1	10.8	11.9	12.7	9.0	
Men	Asian	9.0	8.9	9.8	9.9	10.4	11.4	11.9	8.8	
	Black	12.2	12.9	13.6	13.2	13.6	15.0	16.2	11.9	
	Hispanic	6.1	6.4	6.7	6.5	6.8	7.7	8.7	6.4	
	Other	2.3	2.4	2.6	2.6	2.6	3.0	3.2	2.3	
	White	10.4	10.9	11.5	11.7	12.3	13.5	14.7	10.4	
	All races	6.3	6.6	7.0	7.0	7.3	8.2	8.9	6.4	
Incidence rates										
Women	Classic	38.6, 36.6	18.4, 17.6	17.8, 17.6	29.0, 26.4	42.5, 39.3	39.6, 40.5	57.3, 48.5	32.7, 31.8	
	Non-clas.	35.3, 36.1	32.4, 31.4	18.1, 15.4	28.4, 24.4	33.2, 33.6	32.9, 34.1	36.1, 36.2	30.4, 31.6	
	Possible	0.9, 0.9	0.7, 0.8	1.0, 1.0	0.7, 0.7	1.1, 1.2	0.8, 0.8	0.8, 0.7	1.7, 2.1	
	Total	74.8, 73.6	51.5, 49.8	36.9, 34.0	58.1, 51.5	76.8, 74.1	73.3, 75.4	94.2, 85.4	64.9, 65.5	
Men	Classic	11.8, 11.3	7.2, 7.2	9.1, 9.0	17.6, 15.5	17.8, 15.4	18.4, 16.6	17.2, 14.7	13.9, 13.1	
	Non-clas.	6.5, 6.8	9.0, 9.1	4.3, 4.0	7.5, 7.8	12.0, 12.0	16.8, 15.4	15.9, 13.7	10.5, 10.3	
	Possible	0.6, 0.5	0.6, 0.6	0.5, 0.4	0.2, 0.2	0.6, 0.6	0.3, 0.2	0.2, 0.2	1.1, 1.2	
	Total	18.9, 18.6	16.8, 16.9	13.9, 13.4	25.3, 23.5	30.4, 28.0	35.5, 32.2	33.3, 28.6	25.5, 24.7	

Supplemental Table 2. Average primary hyperparathyroidism crude incidence rates per 100,000 person-years by race and age group for women and men (all years)

All PHPT GROUPS

Women		Race					
Age Group	Asian	Black	Hispanic	Other	White	All races	
20-29	25.6	23.7	6.4	4.5	11.6	12.1	
30-39	19.2	22.8	9.3	5.4	15.5	14.5	
40-49	26.0	40.9	17.9	7.2	30.1	24.4	
50-59	75.2	113.1	66.6	35.9	107.4	79.6	
60-69	130.2	197.6	96.7	56.9	179.0	130.9	
70-79	174.6	297.9	159.2	83.9	248.6	195.7	
≥ 80	352.9	392.1	232.5	142.6	239.3	257.0	
All ages, crude	114.8	155.4	84.1	48.0	118.8	102.0	
All ages, age adjusted	51.8	92.0	48.6	25.4	81.0	59.8	
Men							
Age Group							
20-29	62.9	43.5	10.3	2.9	16.8	21.3	
30-39	50.3	39.5	9.9	4.1	20.3	21.6	
40-49	37.4	39.2	14.7	5.9	22.8	23.0	
50-59	45.7	53.9	23.6	9.0	39.3	35.6	
60-69	67.9	104.5	40.1	17.5	49.0	58.9	
70-79	122.1	160.5	70.5	34.5	78.9	94.6	
≥ 80	175.0	234.8	100.2	51.1	89.2	154.3	
All ages, crude	80.2	96.6	38.5	17.8	45.2	58.5	
All ages, age adjusted	27.9	46.0	17.1	5.9	29.4	25.3	

Classic PHPT

Women		Race					
Age Group	Asian	Black	Hispanic	Other	White	All races	
20-29	9.4	10.0	2.1	1.2	3.8	4.7	
30-39	6.2	9.1	4.4	2.0	7.1	6.2	
40-49	10.8	22.2	10.0	2.3	15.9	13.1	
50-59	29.0	62.4	36.9	11.0	44.1	36.7	
60-69	53.0	123.8	52.9	21.7	76.6	65.6	

70-79	72.6	183.2	82.0	37.3	110.9	98.6
≥ 80	109.4	199.8	99.9	58.1	112.5	119.5
All ages, crude	42.1	97.4	41.0	24.2	57.8	54.0
All ages, age adjusted	21.3	56.7	26.6	11.0	36.3	31.6
Men						
Age Group						
20-29	17.6	14.0	2.8	1.1	4.8	6.6
30-39	16.3	16.0	3.7	0.9	6.0	7.4
40-49	13.4	14.0	6.6	1.5	8.3	8.8
50-59	18.1	27.8	9.4	3.8	17.6	16.8
60-69	27.4	62.1	22.8	7.0	24.3	30.3
70-79	45.0	97.7	34.0	19.0	44.2	53.0
≥ 80	87.6	145.6	73.2	51.1	45.1	84.1
All ages, crude	28.2	59.1	19.4	7.6	21.9	28.7
All ages, age adjusted	13.1	27.3	9.7	2.7	13.6	14.2

Non-classic PHPT

Women	Race					
Age Group	Asian	Black	Hispanic	Other	White	All races
20-29	9.4	7.9	2.9	1.6	5.0	4.3
30-39	6.4	8.8	3.1	1.9	6.5	5.4
40-49	9.2	13.4	5.4	3.4	12.4	8.6
50-59	39.3	44.8	23.7	22.6	61.0	38.3
60-69	66.4	65.8	37.5	30.6	97.5	59.5
70-79	102.0	96.4	64.8	34.2	133.0	86.4
≥ 80	134.6	118.9	84.2	45.0	105.6	95.7
All ages, crude	58.7	58.0	31.5	21.8	60.6	45.8
All ages, age adjusted	28.7	32.8	19.9	13.4	42.3	27.7

Men

Age Group						
20-29	21.1	16.6	3.4	1.8	8.5	8.1
30-39	18.3	13.7	4.1	2.3	10.7	8.9
40-49	14.9	16.2	5.2	2.9	12.1	10.1
50-59	16.6	16.4	10.3	3.2	19.1	13.4
60-69	26.8	32.4	11.8	10.5	20.1	21.4
70-79	37.7	39.5	24.9	15.5	28.9	30.1

≥ 80	87.4	89.2	27.0	---	30.9	57.0
All ages, crude	27.2	33.0	10.6	5.0	19.2	19.2
All ages, age adjusted	13.1	16.4	6.2	3.1	14.4	11.1

Possible PHPT

Women	Race					All races
	Age Group	Asian	Black	Hispanic	Other	
20-29	6.8	5.8	1.4	1.7	2.8	3.1
30-39	6.6	4.9	1.8	1.5	1.9	2.9
40-49	6.0	5.3	2.5	1.5	1.8	2.7
50-59	6.9	5.9	6.0	2.3	2.3	4.6
60-69	10.8	8.0	6.3	4.6	4.9	5.8
70-79	---	18.3	12.4	12.4	4.7	10.7
≥ 80	108.9	73.4	48.4	39.5	21.2	41.8
All ages, crude	20.0	13.2	7.7	7.0	5.8	8.8
All ages, age adjusted	1.8	2.5	2.1	1.0	2.4	2.0

Men

Age Group	Asian	Black	Hispanic	Other	White	All races
20-29	24.2	12.9	4.1	---	3.5	6.6
30-39	15.7	9.8	2.1	0.8	3.6	5.3
40-49	9.1	9.0	2.9	1.5	2.4	4.1
50-59	11.0	9.7	3.9	2.0	2.6	5.4
60-69	13.7	10.0	5.5	---	4.6	7.2
70-79	39.4	23.3	11.6	---	5.8	11.5
≥ 80	---	---	---	---	13.2	13.2
All ages, crude	16.2	10.4	3.9	1.3	4.7	6.4
All ages, age adjusted	1.7	2.3	1.2	0.1	1.4	1.4

Supplemental Table 3. Prevalence of primary hyperparathyroidism per 100,000 (crude, age-adjusted) by year, 1995-2010

		1995	1996	1997	1998	1999	2000	2001	2002	2003
Women	Classic	61.3, 37.3	103.9, 64.0	130.1, 79.1	151.5, 94.9	157.8, 99.5	148.0, 99.8	154.0, 110.7	181.2, 128.6	189.2, 134.8
	Non-clas.	51.9, 29.0	38.4, 25.2	48.2, 27.3	43.0, 25.8	17.8, 10.9	28.6, 13.6	50.0, 28.7	81.3, 55.8	57.9, 38.2
	Possible	21.7, 10.0	18.9, 10.2	14.4, 8.9	14.5, 6.3	7.2, 3.5	6.1, 4.0	9.0, 3.8	7.1, 3.5	13.9, 4.7
	Total	134.9, 76.3	161.2, 99.4	192.7, 115.3	209.0, 127.0	182.8, 113.9	182.7, 117.4	213.0, 143.2	269.6, 187.9	261.0, 177.7
Men	Classic	31.8, 12.2	48.1, 24.6	63.0, 33.1	61.6, 37.7	72.6, 43.1	76.7, 48.8	76.1, 48.3	78.7, 53.4	76.9, 52.8
	Non-clas.	19.6, 10.7	25.4, 16.8	23.0, 12.9	20.3, 14.8	34.2, 9.8	13.8, 8.2	9.4, 6.2	20.3, 15.7	17.1, 10.8
	Possible	12.4, 6.6	12.5, 7.9	14.2, 10.7	13.3, 7.4	8.7, 4.5	16.8, 5.4	8.7, 3.1	4.0, 1.8	4.9, 1.3
	Total	63.8, 29.5	86.0, 49.3	100.2, 56.7	95.2, 59.9	115.5, 57.4	107.3, 62.4	94.2, 57.6	103.0, 70.9	98.9, 64.9

		2004	2005	2006	2007	2008	2009	2010	Mean (All years)
Women	Classic	201.4, 145.0	188.2, 134.8	180.1, 128.8	193.6, 136.6	217.8, 154.5	246.1, 173.4	284.5, 194.1	176.3, 119.7
	Non-clas.	45.9, 29.3	45.0, 27.3	26.7, 14.6	38.0, 20.5	52.3, 29.6	46.0, 30.0	59.5, 34.5	46.2, 28.0
	Possible	7.5, 2.0	7.6, 3.2	4.4, 1.6	3.7, 1.6	8.4, 4.1	7.5, 2.8	9.4, 4.1	10.7, 5.1
	Total	254.8, 176.3	240.8, 165.3	211.2, 145.0	235.3, 158.7	278.5, 188.2	299.6, 206.2	353.4, 232.7	233.2, 152.8
Men	Classic	81.1, 57.1	78.4, 52.8	75.2, 53.1	82.4, 57.8	93.9, 61.6	97.9, 67.4	111.1, 72.0	77.2, 48.5
	Non-clas.	12.9, 8.2	20.7, 9.8	8.1, 2.6	13.3, 8.1	21.4, 13.9	24.6, 11.4	24.9, 12.2	19.5, 11.2
	Possible	4.5, 2.0	2.6, 1.1	3.0, 1.0	5.5, 1.0	3.8, 0.7	3.6, 1.3	3.2, 1.0	9.5, 4.8
	Total	98.5, 67.3	101.7, 63.7	86.3, 56.7	101.2, 66.9	119.1, 76.2	126.1, 80.1	139.2, 85.2	106.2, 64.5

Supplemental Table 4. Average primary hyperparathyroidism crude and age-adjusted prevalence rates by race and age group for women and men (all years)

ALL PHPT GROUPS

Women		Race					All races (mean)
Age Group	Asian	Black	Hispanic	Other	White		
20-29	26.4	31.1	9.7	4.9	18.7	17.0	
30-39	27.7	69.7	17.1	6.7	41.4	33.1	
40-49	41.4	122.4	43.0	12.4	77.9	59.1	
50-59	178.4	336.9	151.6	63.5	256.7	197.8	
60-69	240.1	652.4	269.2	111.3	450.3	344.7	
70-79	336.2	921.5	398.3	182.1	630.3	492.2	
≥ 80	333.1	806.6	359.7	205.0	534.7	452.8	
All ages, crude	169.0	420.1	178.4	83.7	287.1	233.2	
All ages, age adjusted	103.1	321.7	118.3	50.1	201.0	152.8	
Men							
Age Group	Asian	Black	Hispanic	Other	White	All races (mean)	
20-29	47.7	56.7	16.9	3.4	30.3	28.5	
30-39	62.5	100.4	19.7	5.2	37.3	44.1	
40-49	62.1	110.3	36.3	8.2	53.2	54.5	
50-59	117.7	148.8	46.1	9.6	96.1	84.4	
60-69	109.0	305.4	95.7	29.9	111.5	132.1	
70-79	176.6	357.1	131.5	52.5	201.9	183.6	
≥ 80	319.8	481.1	117.6	50.2	164.6	264.1	
All ages, crude	127.9	222.8	66.2	22.7	99.3	106.2	
All ages, age adjusted	63.1	138.4	39.9	10.3	69.1	64.5	

Classic PHPT

Women		Race					All races (mean)
Age Group	Asian	Black	Hispanic	Other	White		
20-29	10.2	15.5	5.0	1.7	10.1	8.7	
30-39	14.8	53.4	11.9	3.2	32.4	23.4	
40-49	24.6	102.5	34.4	7.5	62.8	46.4	

50-59	129.4	284.8	118.5	38.3	191.0	152.4
60-69	160.0	571.5	219.9	75.6	345.4	274.5
70-79	205.2	798.1	320.6	133.0	489.8	389.3
≥ 80	137.4	628.8	227.1	132.8	412.4	321.6
All ages, crude	101.3	356.8	133.9	57.8	220.6	176.3
All ages, age adjusted	69.3	245.9	93.5	35.3	154.7	119.7

Men						
Age Group						
20-29	17.3	18.7	8.8	1.6	18.5	13.4
30-39	29.3	75.2	12.3	1.9	22.3	29.0
40-49	36.9	81.3	27.4	4.3	37.8	38.1
50-59	71.7	118.8	30.8	5.1	72.6	61.1
60-69	62.1	256.2	76.0	15.4	85.5	99.5
70-79	99.5	294.3	93.0	37.0	165.5	142.1
≥ 80	99.1	387.6	90.6	50.2	117.5	168.9
All ages, crude	57.2	175.0	49.3	14.6	74.2	77.2
All ages, age adjusted	40.0	113.4	30.8	6.8	51.4	48.5

Non-classic PHPT

Women						
	Race					
Age Group	Asian	Black	Hispanic	Other	White	All races (mean)
20-29	9.4	7.9	2.9	1.6	5.1	4.4
30-39	6.4	9.7	3.1	1.9	6.5	5.6
40-49	9.2	13.5	5.4	3.4	12.5	8.6
50-59	39.3	44.8	23.7	22.6	61.0	38.3
60-69	66.4	65.8	37.5	30.6	97.5	59.5
70-79	102.0	96.5	64.8	34.2	133.0	86.4
≥ 80	134.6	127.4	84.2	45.0	104.8	97.7
All ages, crude	58.7	60.1	31.5	21.8	60.5	46.2
All ages, age adjusted	28.7	34.1	19.9	13.4	42.3	28.0

Men						
Age Group						
20-29	21.1	16.6	3.4	1.8	8.5	8.1
30-39	18.3	13.7	4.1	2.3	10.7	8.9

40-49	14.9	16.2	5.2	2.9	12.1	10.1
50-59	16.6	16.4	10.3	3.2	19.1	13.4
60-69	26.9	32.4	11.8	10.5	20.1	21.4
70-79	37.7	39.5	24.9	15.5	28.9	30.1
≥ 80	87.4	93.5	27.0	0	30.9	59.4
All ages, crude	27.2	34.4	10.6	5.0	19.2	19.5
All ages, age adjusted	13.1	16.7	6.2	3.1	14.4	11.2

Possible PHPT

Women		Race					All races (mean)
Age Group	Asian	Black	Hispanic	Other	White		
20-29	6.8	7.7	1.8	1.5	3.6	3.9	
30-39	6.5	6.6	2.1	1.6	2.5	4.1	
40-49	7.6	6.4	3.1	1.5	2.6	4.1	
50-59	9.7	7.3	9.4	2.5	4.7	7.1	
60-69	13.7	15.1	11.8	5.1	7.4	10.7	
70-79	29.0	26.9	12.9	14.9	7.5	16.5	
≥ 80	61.1	50.4	48.4	27.2	17.5	33.5	
All ages, crude	14.2	15.7	10.9	4.8	7.0	10.7	
All ages, age adjusted	5.1	8.2	4.9	1.4	4.0	5.1	

Men

Age Group	Asian	Black	Hispanic	Other	White	All races (mean)
20-29	9.3	21.4	4.7	0	3.3	7.0
30-39	14.9	11.5	3.3	1.0	4.3	6.2
40-49	10.3	12.8	3.7	1.0	3.3	6.3
50-59	29.4	13.6	5.0	1.3	4.4	9.9
60-69	20.0	16.8	7.9	4.0	5.9	11.2
70-79	39.4	23.3	13.6	0	7.5	11.4
≥ 80	133.3	0	0	0	16.2	35.8
All ages, crude	24.6	14.4	5.3	1.4	5.9	9.5
All ages, age adjusted	10.0	8.3	2.9	0.4	3.3	4.8

Supplemental Table 5. Crude and age-adjusted prevalence rates by race and age group for women and men (2010 only).

ALL PHPT GROUPS

Women		Race					All races (mean)
Age Group	Asian	Black	Hispanic	Other	White		
20-29	6.9	30.6	11.4	2.4	20.1	14.3	
30-39	16.7	70.6	18.3	6.8	43.8	31.3	
40-49	82.8	166.8	50.6	9.8	119.7	85.9	
50-59	237.2	510.4	182.7	45.2	353.4	265.8	
60-69	393.0	1,043.0	338.9	93.3	660.6	505.8	
70-79	533.2	1,408.9	598.7	181.0	1109.9	766.3	
≥ 80	631.1	1,374.6	619.2	162.8	894.5	736.5	
All ages, crude	271.6	657.8	260.0	71.6	457.4	353.4	
All ages, age adjusted	183.7	447.9	169.4	46.2	312.0	232.7	
Men							
Age Group							
20-29	22.2	41.0	12.8	1.9	31.1	21.8	
30-39	46.2	101.0	21.1	1.0	33.2	40.5	
40-49	41.8	104.5	38.4	4.0	74.1	52.6	
50-59	98.1	182.3	47.9	17.5	122.2	93.6	
60-69	151.0	478.6	117.8	18.0	163.9	185.8	
70-79	167.0	511.2	186.4	36.1	393.2	258.8	
≥ 80	182.6	369.4	211.9	108.6	312.1	236.9	
All ages, crude	101.3	255.4	90.9	26.7	161.4	139.2	
All ages, age adjusted	71.8	177.5	54.8	12.0	103.1	85.2	

Classic PHPT

Women		Race					All races (mean)
Age Group	Asian	Black	Hispanic	Other	White		
20-29	6.9	30.6	7.1	2.4	10.0	11.4	
30-39	8.3	65.2	16.2	5.1	33.9	25.7	
40-49	50.6	158.8	43.8	4.9	105.9	72.5	
50-59	192.4	452.3	157.1	40.3	294.1	227.2	
60-69	310.6	944.5	307.3	74.6	551.2	437.6	
70-79	350.8	1281.7	519.7	156.3	933.7	648.4	
≥ 80	385.7	1169.5	450.3	116.3	718.9	568.1	
All ages, crude	186.5	586.1	214.5	57.1	378.2	284.5	
All ages, age adjusted	129.2	402.6	142.6	37.3	258.8	194.0	
Men							
Age Group							
20-29	22.2	41.0	10.6	1.9	25.9	20.3	
30-39	27.6	89.7	19.5	---	24.9	40.5	
40-49	41.8	104.5	34.2	3.0	60.4	48.8	
50-59	91.1	162.8	42.5	13.8	100.6	82.8	
60-69	125.8	435.1	98.2	10.3	121.7	158.2	
70-79	121.4	458.8	159.8	18.0	314.0	214.4	
≥ 80	91.3	332.5	211.9	108.6	250.6	199.0	
All ages, crude	74.5	232.1	82.4	25.9	128.3	108.6	
All ages, age adjusted	58.0	162.7	48.4	8.9	82.0	72.0	

Non-classic PHPT

Women		Race					All races (mean)
Age Group	Asian	Black	Hispanic	Other	White		
20-29	---	---	2.4	---	10.0	6.4	
30-39	8.4	5.4	2.2	1.7	10.0	5.5	
40-49	23.0	4	3.4	3.3	12.3	9.2	
50-59	35.8	53.9	21.1	4.8	54.5	34.0	
60-69	76.0	81.1	34.6	18.6	102.3	61.9	
70-79	182.4	107.6	79.1	24.7	173.9	113.5	
≥ 80	245.4	164.1	140.7	46.5	172.4	153.8	
All ages, crude	95.2	69.4	40.1	16.6	76.5	59.6	
All ages, age adjusted	50.6	37.9	23.5	8.6	51.1	34.5	
Men							
Age Group							
20-29	---	---	2.1	---	5.2	3.6	
30-39	18.5	11.2	---	---	8.3	12.7	
40-49	---	---	4.1	1.0	13.6	6.2	
50-59	7.0	19.5	3.5	2.5	20.1	10.5	
60-69	25.2	43.5	16.4	7.7	37.3	26.0	
70-79	45.5	52.4	26.6	18.0	68.9	42.3	
≥ 80	91.3	36.9	---	---	61.5	63.2	
All ages, crude	37.5	32.7	10.6	7.3	30.7	23.8	
All ages, age adjusted	13.9	14.8	5.4	2.7	19.7	12.2	

Possible PHPT

Women		Race					All races (mean)
Age Group	Asian	Black	Hispanic	Other	White		
20-29	---	---	1.4	---	---	1.4	
30-39	---	---	---	---	---	---	
40-49	9.2	4.0	3.4	1.6	1.5	3.9	
50-59	8.9	4.1	4.5	---	4.8	5.6	
60-69	6.3	17.4	---	---	7.1	10.3	
70-79	---	19.6	---	---	2.3	10.9	
≥ 80	---	41.0	28.1	---	3.2	24.1	
All ages, crude	8.2	17.2	9.4	1.6	3.8	8.0	
All ages, age adjusted	3.9	7.4	3.3	0.3	2.2	4.1	
Men							
Age Group							
20-29	---	---	---	---	---	---	
30-39	---	---	1.6	1.0	---	1.3	
40-49	---	---	---	---	---	---	
50-59	---	---	1.8	1.2	1.4	1.5	
60-69	---	---	3.3	---	4.9	4.1	
70-79	---	---	---	---	10.2	10.2	
≥ 80	---	---	---	---	---	---	
All ages, crude	---	---	2.2	1.1	5.5	1.8	
All ages, age adjusted	---	---	1.0	0.4	1.4	1.0	

Supplemental Table 6. Vitamin D levels by race and by gender

Gender	Vitamin D level	Race						*p-value
		All n (%)	Asian n (%)	Black n (%)	Hispanic n (%)	Other n (%)	White n (%)	
All	Sufficient	2,267 (43.8)	175 (61.8)	250 (40.2)	277 (44.5)	108 (50.0)	1,457 (60.7)	0.004
	Insufficient	1,198 (28.9)	76 (26.8)	180 (28.9)	204 (32.7)	66 (30.6)	672 (28.0)	
	Deficient	680 (16.4)	32 (11.3)	192 (30.9)	142 (22.8)	42 (16.0)	272 (11.3)	
Women	Sufficient	1,814 (56.0)	144 (63.7)	201 (41.4)	215 (44.3)	90 (53.6)	1,164 (37.6)	0.018
	Insufficient	908 (28.0)	61 (27.0)	138 (28.4)	154 (31.8)	51 (30.4)	504 (26.9)	
	Deficient	518 (16.0)	21 (9.3)	146 (30.2)	116 (23.9)	27 (16.0)	208 (11.1)	
Men	Sufficient	453 (50.0)	31 (54.4)	49 (35.8)	62 (44.9)	18 (37.6)	293 (55.8)	0.317
	Insufficient	290 (32.0)	15 (26.3)	42 (30.6)	50 (36.3)	15 (31.2)	168 (32.0)	
	Deficient	162 (17.9)	11 (19.3)	46 (33.6)	26 (18.8)	15 (31.2)	64 (12.2)	

Sufficient: ≥ 30 ng/mL (≥ 74.9 nmol/L)

Insufficient: 20-29 ng/mL (49.9-72.4 nmol/L)

Deficient: < 20 ng/mL (< 49.9 nmol/L)

Note: Percents of Vitamin D levels total within race group for each gender.

*Results from chi-square tests using a 5x3 frequency table