Supplementary Table 3. Basic Demographics of patients who filled (AOM users) or did not fill (AOM non-users) an anti-osteoporosis medication within 90 days of starting a glucocorticoid (2000-2012)

Characteristic	Crude Population			Weighted Population		
	AOM users	AOM non-users	p	AOM users	AOM non-users	p
N	952	6933		937	6937	
Region, N (%)			*			
North Central	322 (33.8)	2244 (32.4)		310 (33.1)	2261 (32.6)	
Northeast	160 (16.8)	984 (14.2)		138 (14.7)	1001 (14.4)	
South	228 (23.9)	1956 (28.2)		246 (26.3)	1917 (27.6)	
West	231 (24.3)	1653 (23.8)		234 (25.0)	1666 (24.0)	
Unknown	11 (1.2)	96 (1.4)		8 (0.9)	92 (1.3)	
Mean Age (SD)	67.5 (10.6)	66.6 (11.4)	*	67.0 (11.4)	66.7 (11.3)	
Age by decade[b]			**			
50-59	260 (27.3)	2421 (34.9)		296 (31.6)	2360 (34.0)	
60-69	276 (29.0)	1839 (26.5)		256 (27.4)	1867 (26.9)	
70-79	270 (28.4)	1535 (22.1)		221 (23.6)	1576 (22.7)	
80+	146 (15.3)	1138 (16.4)		163 (17.4)	1135 (16.4)	
Year of Index Fill, N (%)			**			
2001	27 (2.8)	195 (2.8)		24 (2.6)	195 (2.8)	
2002	80 (8.4)	466 (6.7)		61 (6.5)	482 (6.9)	
2003	96 (10.1)	493 (7.1)		76 (8.2)	518 (7.5)	
2004	99 (10.4)	677 (9.8)		91 (9.7)	684 (9.9)	
2005	127 (13.3)	760 (11.0)		119 (12.7)	784 (11.3)	
2006	97 (10.2)	527 (7.6)		71 (7.6)	547 (7.9)	
2007	73 (7.7)	532 (7.7)		64 (6.8)	534 (7.7)	
2008	93 (9.8)	574 (8.3)		81 (8.7)	587 (8.5)	
2009	94 (9.9)	748 (10.8)		108 (11.6)	738 (10.6)	
2010	65 (6.8)	612 (8.8)		80 (8.5)	596 (8.6)	
2011	68 (7.1)	789 (11.4)		98 (10.5)	752 (10.8)	
2012	33 (3.5)	560 (8.1)		62 (6.6)	521 (7.5)	
Type of Insurance			**			
CDHP	4 (0.4)	81 (1.2)		4 (0.4)	78 (1.1)	
Comprehensive	321 (33.7)	2080 (30.0)		291 (31.1)	2115 (30.5)	
EPO	5 (0.5)	33 (0.5)		8 (0.9)	32 (0.5)	
HDHP	1 (0.1)	35 (0.5)		2 (0.2)	33 (0.5)	
HMO	192 (20.2)	1383 (19.9)		194 (20.8)	1400 (20.2)	
POS	44 (4.6)	375 (5.4)		45 (4.8)	377 (5.4)	
POS with capitation	10 (1.1)	102 (1.5)		9 (1.0)	102 (1.5)	
PPO	363 (38.1)	2709 (39.1)		368 (39.3)	2670 (38.5)	
Unknown	12 (1.3)	135 (1.9)		15 (1.6)	131 (1.9)	
In 365 days prior to index						
Osteoporosis, N (%)	80 (8.4)	222 (3.2)	**	41 (4.4)	272 (3.9)	
Lifestyle Factors, N (%)						

Characteristic	Crude Population			Weighted Population		
	AOM users	AOM non-users	p	AOM users	AOM non-users	p
Alcohol Abuse[a]	0 (0.0)	16 (0.2)		0 (0.0)	15 (0.2)	
Falling	5 (0.5)	39 (0.6)		5 (0.5)	39 (0.6)	
Vitamin D insufficiency	7 (0.7)	168 (2.4)	**	16 (1.7)	154 (2.2)	
Excess Vitamin A	1 (0.1)	11 (0.2)		1 (0.1)	11 (0.2)	
Genetic factors, N (%)						
Cystic fibrosis[a]	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Homocystinuria[a]	1 (0.1)	2 (0.0)		0 (0.0)	2 (0.0)	
Osteognesis imperfecta[a]	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Ehlers-Danos[a]	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Hypophosphatasia[a]	0 (0.0)	16 (0.2)		0 (0.0)	15 (0.2)	
Gaucher's disease[a]	0 (0.0)	3 (0.0)		0 (0.0)	3 (0.0)	
Idiopathic hypercalciuria	16 (1.7)	86 (1.2)		10 (1.0)	88 (1.3)	
Porphyria[a]	0 (0.0)	1 (0.0)		0 (0.0)	1 (0.0)	
Glyogen storage diseases[a]	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Marfan syndrome[a]	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Riley-Day syndrome[a]	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Hemochromatosis[a]	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Menkes steely hair syndrome[a]	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Hypogonadal states, N (%)						
Androgen insensitivity[a]	0 (0.0)	1 (0.0)		0 (0.0)	1 (0.0)	
Anorexia nervosa and bulimia	2 (0.2)	16 (0.2)		1 (0.1)	16 (0.2)	
Hyperprolactinemia	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Premature ovarian failure[a]	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Athletic amenorrhea	1 (0.1)	7 (0.1)		1 (0.1)	7 (0.1)	
Turner and Klinefelters's syndromes[a]	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Panhypopituitarism[a]	0 (0.0)	2 (0.0)		0 (0.0)	2 (0.0)	
Endocrine disorders, N (%)						
Adrendal insufficiency	5 (0.5)	24 (0.3)		6 (0.7)	25 (0.4)	
Diabetes mellitus (Type 1 & 2)	117 (12.3)	1182 (17.0)	**	138 (14.8)	1143 (16.5)	
Cushing's syndrome[a]	0 (0.0)	4 (0.1)		0 (0.0)	4 (0.1)	

Characteristic	Crude Population			Weighted Population		
	AOM users	AOM non-users	p	AOM users	AOM non-users	p
Hyperparathyroidism	3 (0.3)	18 (0.3)		2 (0.2)	18 (0.3)	
Central Adiposity	16 (1.7)	244 (3.5)	**	27 (2.9)	229 (3.3)	
Thyrotoxicosis	20 (2.1)	101 (1.5)		16 (1.7)	106 (1.5)	
Gastrointestinal disorders, N (%)						
Celiac disease	2 (0.2)	12 (0.2)		2 (0.2)	12 (0.2)	
Gastric bypass[a]	0 (0.0)	4 (0.1)		0 (0.0)	4 (0.1)	
Inflammatory Bowel Disease	12 (1.3)	271 (3.9)	**	49 (5.3)	249 (3.6)	*
Malabsorption	3 (0.3)	33 (0.5)		6 (0.6)	32 (0.5)	
Pancreatic disease	4 (0.4)	58 (0.8)		10 (1.1)	55 (0.8)	
Primary biliary cirrhosis	4 (0.4)	23 (0.3)		3 (0.3)	24 (0.3)	
Hematologic disorders, N (%)						
Hemophilia	9 (0.9)	80 (1.2)		7 (0.8)	78 (1.1)	
Thalassemia	0 (0.0)	3 (0.0)		0 (0.0)	3 (0.0)	
Sickle cell anemia	0 (0.0)	1 (0.0)		0 (0.0)	1 (0.0)	
Systemic mastocytosis	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Rheumatologic and autoimmune diseases, N (%)						
Ankylosing spondylitis	7 (0.7)	61 (0.9)		6 (0.7)	60 (0.9)	
Lupus	28 (2.9)	219 (3.2)		30 (3.2)	218 (3.1)	
Rheumatoid arthritis	135 (14.2)	1078 (15.5)		128 (13.7)	1066 (15.4)	
Central nervous system disorders, N (%)						
Epilepsy	5 (0.5)	52 (0.8)		8 (0.9)	50 (0.7)	
Parkinson's disease	1 (0.1)	36 (0.5)		1 (0.1)	32 (0.5)	
Stroke	90 (9.5)	621 (9.0)		83 (8.9)	626 (9.0)	
Multiple sclerosis	6 (0.6)	44 (0.6)		6 (0.7)	44 (0.6)	
Spinal cord injury	1 (0.1)	2 (0.0)		0 (0.0)	2 (0.0)	
Alzheimers	21 (2.2)	273 (3.9)	**	40 (4.2)	259 (3.7)	
Miscellaneous conditions and diseases, N (%)						
AIDS/HIV[a]	0 (0.0)	6 (0.1)		0 (0.0)	6 (0.1)	
Congestive Heart Failure	76 (8.0)	697 (10.1)	*	84 (9.0)	677 (9.8)	
Muscular dystrophy	2 (0.2)	3 (0.0)		1 (0.1)	4 (0.1)	
Liver Disease	59 (6.2)	390 (5.6)		51 (5.5)	394 (5.7)	
Depression	45 (4.7)	518 (7.5)	**	61 (6.5)	496 (7.1)	
Amyloidosis	2 (0.2)	1 (0.0)	**	0 (0.0)	1 (0.0)	
End stage renal disease	18 (1.9)	233 (3.4)	*	42 (4.5)	222 (3.2)	*
Sarcoidosis	25 (2.6)	143 (2.1)		19 (2.0)	147 (2.1)	
Chronic metabolic acidosis	5 (0.5)	44 (0.6)		6 (0.6)	44 (0.6)	

Characteristic	Crude Population			Weighted Population		
	AOM users	AOM non-users	p	AOM users	AOM non-users	p
Asthma/Chronic obstructive lung disease	158 (16.6)	1352 (19.5)	*	175 (18.7)	1328 (19.1)	
Idiopathic scoliosis	6 (0.6)	48 (0.7)		5 (0.5)	48 (0.7)	
Cataracts	164 (17.2)	980 (14.1)	*	141 (15.0)	1008 (14.5)	
Glaucoma	86 (9.0)	561 (8.1)		78 (8.3)	570 (8.2)	
Kyphosis	171 (18.0)	768 (11.1)	**	116 (12.4)	833 (12.0)	
Medications, N (%)						
Cyclosporine A and tacrolimus	21 (2.2)	159 (2.3)		19 (2.0)	159 (2.3)	
Proton pump inhibitors	257 (27.0)	1951 (28.1)		280 (29.9)	1943 (28.0)	
Anticoagulants	57 (6.0)	587 (8.5)	**	70 (7.5)	567 (8.2)	
Selective serotonin reuptake inhibitors	147 (15.4)	1263 (18.2)	*	177 (18.9)	1245 (17.9)	
Anticonvulsants	93 (9.8)	868 (12.5)	*	133 (14.2)	847 (12.2)	
Aromatase inhibitors[a]	0 (0.0)	2 (0.0)		0 (0.0)	2 (0.0)	
GnRH (Gonadotropin releasing hormone) antagonists and agonists[a]	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	
Thiazolidinediones	15 (1.6)	204 (2.9)	*	21 (2.2)	192 (2.8)	
Barbiturates	1 (0.1)	17 (0.2)		8 (0.8)	16 (0.2)	**
Lithium	1 (0.1)	11 (0.2)		1 (0.2)	11 (0.2)	
Methotrexate	55 (5.8)	389 (5.6)		51 (5.4)	391 (5.6)	
Calcitonin	11 (1.2)	86 (1.2)		10 (1.1)	86 (1.2)	
Hormone Replacement Therapy	198 (20.8)	1347 (19.4)		186 (19.9)	1364 (19.7)	
Raloxifene	23 (2.4)	124 (1.8)		21 (2.2)	131 (1.9)	
Healthcare Resources, N (%)						
DXA	177 (18.6)	708 (10.2)	**	111 (11.8)	788 (11.4)	
Inpatient Admission						
0	715 (75.1)	4993 (72.0)		682 (72.8)	5025 (72.4)	
1	172 (18.1)	1441 (20.8)		187 (19.9)	1419 (20.5)	
2+	65 (6.8)	499 (7.2)		68 (7.3)	494 (7.1)	
Outpatient Visits						
0	32 (3.4)	251 (3.6)		32 (3.4)	248 (3.6)	
1 to 6	189 (19.9)	1465 (21.1)		185 (19.8)	1453 (20.9)	
7 to 12	245 (25.7)	1620 (23.4)		216 (23.1)	1638 (23.6)	
13+	486 (51.1)	3597 (51.9)		504 (53.8)	3598 (51.9)	
Charlson Comorbidity Score						
0	811 (85.2)	5682 (82.0)		777 (83.0)	5716 (82.4)	
1	27 (2.8)	212 (3.1)		28 (3.0)	210 (3.0)	
2	55 (5.8)	498 (7.2)		71 (7.6)	487 (7.0)	

Characteristic	Crude Population			Weighted Population		
	AOM users	AOM non-users	p	AOM users	AOM non-users	p
3-5	52 (5.5)	431 (6.2)		51 (5.4)	422 (6.1)	
6+	7 (0.7)	110 (1.6)		10 (1.0)	103 (1.5)	
In 90 days post index						
Osteoporosis, N (%)	100 (10.5)	151 (2.2)	**	34 (3.6)	225 (3.2)	
Healthcare Resources, N (%)						
DXA	264 (27.7)	626 (9.0)	**	115 (12.3)	787 (11.3)	
Inpatient Admission						
0	839 (88.1)	6198 (89.4)		833 (88.9)	6188 (89.2)	
1	100 (10.5)	630 (9.1)		92 (9.8)	646 (9.3)	
2+	13 (1.4)	105 (1.5)		12 (1.3)	103 (1.5)	
Outpatient Visits			**			
0	46 (4.8)	425 (6.1)		54 (5.8)	414 (6.0)	
1 to 6	374 (39.3)	3116 (44.9)		397 (42.4)	3067 (44.2)	
7 to 12	324 (34.0)	2120 (30.6)		294 (31.4)	2153 (31.0)	
13+	208 (21.8)	1272 (18.3)		192 (20.4)	1303 (18.8)	

*: p≤0.05; ** p≤0.01; [a]: Not included in propensity score due to no subjects in one or both groups; [b]: Not included in propensity score due to the use of continuous age; EPO: Exclusive Provider Organization; HMO: Health Maintenance Organization; POS: Point of Service; PPO: Preferred Provider Organization; CDHP: Consumer Directed Health Plan; HDHP: High deductible health plan