

SUPPLEMENTARY TABLES

Supplementary Table 1. Definition of the comorbidities registered.

Comorbidities	Definition
AHT	Diagnosis of arterial hypertension in actual treatment with antihypertensive drugs.
Diabetes	Diagnosis of diabetes, treated with diet, oral drugs or insulin administration.
Pulmonary disease	Any disease affecting respiratory system functionality and treated with any of the related drugs. Patients suffering from asthma, Chronic obstructive pulmonary disease (COPD), Pulmonary fibrosis, Obstructive sleep apnea syndrome (OSAS) and interstitial lung disease were specifically registered.
CV disease	Diagnosis of cardiovascular disease
Chronic kidney disease	Chronic kidney disease diagnosis, in any of the stages.
Active cancer or treatment	Patients in a cancer process or in treatment for a previous cancer, along the period studied (1 st to the 29 th of March)
Tissue or organ transplantation	Any transplantation throughout the patient's life, in actual treatment.

Supplementary Table 2. List of types of treatments registered and drugs belonging to each type.

Type of treatment	Drugs included		
Analgesics	NSAIDs		
	Opioids		
	Pregabalin		
	Gabapentin		
	Other analgesics		
Antidepressants	Dual Acting	Duloxetine Venlafaxine Others	
	Tricyclic	Amitriptyline Other	
		Selective serotonin reuptake inhibitors (SSRIs)	
		Reboxetine	
		Other antidepressants	
	Antiresorptive Agents	Bisphosphonates	Oral Intravenous
			Denosumab
		Selective estrogen receptor modulator (SERM)	
Anabolic Agents	Teriparatide		
Supplements for osteoporosis	Calcium		
	Vitamin D (in any of its forms or metabolites)		
	Thiazides diuretics		
Corticoids	Any type of oral corticoid (all converted to prednisone dose)		
	Any type of inhaled corticoids		
Antihypertensive drugs	Angiotensin-converting enzyme (Enalapril, Ramipril, Lisinopril, ...)		
	Angiotensin II Receptor Blockers (Losartan, Valsartan, Candesartan...)		

Supplementary Table 3. Relative risk (RR) and 95% confidence interval (95% CI) of hsCOVID-19 after propensity score matching.

Sample size	Denosumab			Intravenous Zoledronate			Calcium		
		control	treated		control	treated		control	treated
N All	1838	264		N All	1923	179	N All	1612	490
N matched	264	264		N matched	179	179	N matched	490	490
N unmatched	1574	0		N unmatched	1744	0	N unmatched	1122	0
COVID-19 (matched data)	Yes	11	8	Yes	11	6	Yes	22	16
	No	253	256	No	168	173	No	468	474
Crude RR (95%CI)	0.73 (0.30-1.78)			0.55 (0.20-1.44)			0.72 (0.39-1.37)		
Adjusted RR (95%CI)*	0.87 (0.30-2.52)			0.43 (0.14-1.35)			0.67 (0.36-1.27)		
Summary of balance for matched data	Means	Means	Mean Diff	Means	Means	Mean Diff	Means	Means	Mean Diff
	Treated	Control		Treated	Control		Treated	Control	
Osteoporosis	0.97	0.97	0.00	0.92	0.92	0.00	0.77	0.77	0.00
Women	0.86	0.86	-0.01	0.77	0.80	-0.03	0.85	0.88	-0.02
Age	74.05	73.29	0.76	71.61	71.69	-0.08	71.34	71.57	-0.22
CV disease	0.17	0.13	0.04	0.18	0.17	0.02	0.17	0.16	0.01
Diabetes	0.12	0.10	0.02	0.18	0.17	0.01	0.10	0.12	-0.02
Pulmonary disease	0.20	0.21	-0.01	0.19	0.17	0.02	0.16	0.14	0.01
Renal disease	0.11	0.09	0.01	0.08	0.04	0.03	0.07	0.06	0.01
Cancer	0.09	0.08	0.02	0.15	0.15	0.01	0.08	0.08	0.00

CV= cardiovascular.

*RR for denosumab is adjusted by the exposure to calcium, bisphosphonates, vitamin D, thiazide, analgesics, dual antidepressants, tricyclic antidepressants, SSRI antidepressants (selective serotonin reuptake inhibitors), glucocorticoids, anti-hypertensive drugs and NSAIDs. RR for intravenous zoledronate is adjusted by the exposure to denosumab, oral bisphosphonates, calcium, vitamin D, thiazide, analgesics, dual antidepressants, tricyclic antidepressants, SSRI antidepressants, glucocorticoids, anti-hypertensive drugs and NSAIDs. RR for calcium is adjusted by the exposure to denosumab, bisphosphonates, vitamin D, thiazide, analgesics, dual antidepressants, tricyclic antidepressants, SSRI antidepressants, glucocorticoids, anti-hypertensive drugs and NSAIDs.