Supplementary Table 6.1: Tuning parameters considered to develop a Random Forest prediction model of readmission in a rheumatology outpatient clinic

Parameter	Description	Values
ntree	Number of trees to grow	100, 250, 500, 1000
mtry	Number of variables randomly sampled as candidates at each split	$\sqrt{P}$-10, $\sqrt{P}$-5, $\sqrt{P}$+5, $\sqrt{P}$+10
SMOTE	k: k-nearest neighbors of each example of the minority class to be used to create new instances perc.over: Number of instances of the minority class to be created	Original training dataset k: 1, 2, 3, 5, 7, 9 perc.over: 100, 200, 300, 400
sampsize	Size of the sample to grow	Default (number of discharges), 50/50, 67/33
relative VIMP	Importance of predictors of the main model. Used to build a reduced model	All variables, rVIMP >1, rVIMP >5, rVIMP >10, rVIMP >20, rVIMP >50
mtry'	Number of variables randomly sampled as candidates at each split	$\sqrt{P'}$-10, $\sqrt{P'}$-5, $\sqrt{P'}$+5, $\sqrt{P'}$+10
PCA	Cumulative proportion of variance of principal components	CP: 0.25, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9

Supplementary Table 6.2: Values of over and under sampling used in the Synthetic Minority Over-Sampling Technique (SMOTE) in the training dataset

perc.over	perc.under	Number of episodes without outpatient readmission	Number of episodes with outpatient readmission
100	554.11	10,988	3,966
200	277.05	10,988	5,949
300	184.70	10,988	7,932
400	138.53	10,988	9,915

Supplementary Table 6.3: Sensibility and specificity for the "discharge status" variable

	Sensitivity	Specificity
All reviewed visits	0.805	0.709
Reviewed visits with no return	0.857	0.684
Reviewed visits with return, anytime	0.718	0.892
Return in the first 12 months	0.825	0.693
Return in the first 12 months excluding the first month	0.937	0.672
Return in the first 12 months excluding the first 2 months	0.935	0.690
Return in the first 12 months excluding the first 3 months	0.931	0.695
Return in the first 12 months excluding the first 4 months	0.927	0.714
Return in the first 12 months excluding the first 5 months	0.924	0.729
Return in the first 12 months excluding the first 6 months	0.913	0.753
Return in the first 12 months excluding the first 7 months	0.919	0.722
Return in the first 12 months excluding the first 8 months	0.922	0.742
Return in the first 12 months excluding the first 9 months	0.921	0.728
Return in the first 12 months excluding the first 10 months	0.905	0.725
Return in the first 12 months excluding the first 11 months	0.886	0.771

Supplementary Table 6.4: Demographic and clinical-related characteristics at first visit in the Hospital Clínico San Carlos (HCSC) rheumatology outpatient clinic of the patients from the HCSC musculoskeletal cohort used to develop a prediction model of outpatient readmission, based on their readmission or not to the clinic. Differences are expressed as Standardized Mean Differences

Variables	With outpatient readmission n = 2,528	Without outpatient readmission n = 16,134	Standardized Mean Difference
Age in years, median (Q1-Q3)	59.8 (48-73.2)	55.4 (43.9-69.4)	0.205
Distress, n (%)	-	-	0.193
None	322 (12.74)	2,994 (18.56)	-
Low	1,678 (66.38)	10,615 (65.79)	-
Moderate	510 (20.17)	2,423 (15.02)	-
High	18 (0.71)	103 (0.64)	-
Disability, n (%)	-	-	0.300
None	730 (28.88)	6,897 (42.75)	-
Slight social	1,229 (48.62)	6,364 (39.44)	-
Severe social and slight physical	331 (13.09)	1,715 (10.63)	-
Moderate decrease in mobility	163 (6.45)	708 (4.39)	-
Severe decrease in mobility	63 (2.49)	334 (2.07)	-
Almost dependent	12 (0.47)	110 (0.68)	-
In bed	-	7 (0.04)	-
Rosser Index, median (Q1-Q3)	98.6 (97.3-99.5)	98.6 (98.6-99.5)	
Occupation, n (%)	-	-	0.179
Active	1,278 (50.55)	9,248 (57.32)	-
Housework	707 (27.97)	3,671 (22.75)	-
Retired	511 (20.21)	2,807 (17.40)	-
Student	32 (1.27)	409 (2.54)	-
Diagnosis, n (%)	-	-	-
Axial neuropathy	81 (3.2)	443 (2.75)	0.027
Back pain	286 (11.31)	2,646 (16.4)	0.148
Chronic polyarthritis	210 (8.31)	179 (1.11)	0.345
Crystal arthropathy	92 (3.64)	450 (2.79)	0.048
Fibromyalgia	42 (1.66)	167 (1.04)	0.054
Gout	71 (2.81)	291 (1.8)	0.067
Muscle disorders	68 (2.69)	698 (4.33)	0.089
Neck pain	128 (5.06)	1,096 (6.79)	0.073
No diagnoses	264 (10.44)	2,276 (14.11)	0.112
Generalized or Unspecified Osteoarthritis	173 (6.84)	1,064 (6.59)	0.01
Osteoarthritis of first carpometacarpal joints	51 (2.02)	386 (2.39)	0.026
Osteoarthritis of hand	81 (3.2)	865 (5.36)	0.107
Osteoarthritis of hip	40 (1.58)	275 (1.7)	0.01
Osteoarthritis of knee	239 (9.45)	1,469 (9.1)	0.012
Osteoporosis	73 (2.89)	346 (2.14)	0.047
Osteoporosis fracture	69 (2.73)	222 (1.38)	0.096

Other connective tissue inflammatory diseases	101 (4)	211 (1.31)	0.168
Other non-inflammatory diseases	33 (1.31)	379 (2.35)	0.078
Pain in joint	167 (6.61)	1,965 (12.18)	0.192
Peripheral neuropathy	84 (3.32)	414 (2.57)	0.045
Spondyloarthropathies	56 (2.22)	77 (0.48)	0.151
Tendinitis	93 (3.68)	727 (4.51)	0.042
Tendinitis lower extremities	227 (8.98)	1,113 (6.9)	0.077
Tendinitis upper extremities	446 (17.64)	2,571 (15.94)	0.046
Treatment, n (%)	-	-	-
Analgesic 1st level	835 (33.03)	5,434 (33.68)	0.014
Analgesic 2nd and 3rd level	245 (9.69)	1,165 (7.22)	0.089
Antidepressant	38 (1.5)	162 (1)	0.045
Antiosteoporotic	79 (3.12)	288 (1.79)	0.087
Benzodiazepine	158 (6.25)	1,210 (7.5)	0.049
Calcium and vitamin D	196 (7.75)	727 (4.51)	0.136
Colchicine	50 (1.98)	192 (1.19)	0.063
Corticosteroid	288 (11.39)	630 (3.9)	0.285
Gabapentin	47 (1.86)	267 (1.65)	0.016
Gastric protector	405 (16.02)	2,179 (13.51)	0.071
Lowering uric acid drugs	22 (0.87)	88 (0.55)	0.039
NSAIDs	781 (30.89)	5,141 (31.86)	0.021
NSAIDs hard	39 (1.54)	166 (1.03)	0.046
Other DMARDs	105 (4.15)	29 (0.18)	0.276
Other drugs	37 (1.46)	186 (1.15)	0.027
SYSADOA	35 (1.38)	296 (1.83)	0.036

NSAIDs: Nonsteroidal anti-inflammatory drugs; SYSADOA: Symptomatic Slow Action Drugs for Osteoarthritis; DMARDs: Disease-Modifying Anti-rheumatic drugs

Supplementary Table 6.5: Clinical-related characteristics at the first visit of each episode, of the patients included in the Hospital Clínico San Carlos musculoskeletal cohort, based on their readmission or not to the clinic. Differences are expressed as Standardized Mean Differences

Variables	With outpatient readmission n = 2,528	Without outpatient readmission n = 16,134	Standardized Mean Difference
Distress, n (%)	-	-	0.189
None	324 (12.82)	2,987 (18.51)	
Low	1,671 (66.10)	10,588 (65.63)	
Moderate	514 (20.33)	2,462 (15.26)	
High	19 (0.75)	97 (0.60)	
Disability, n (%)	-	-	0.295
None	735 (29.07)	6,896 (42.74)	
Slight social	1,234 (48.81)	6,348 (39.35)	
Severe social and slight physical	352 (13.92)	1,740 (10.78)	
Moderate decrease in mobility	141 (5.58)	689 (4.27)	
Severe decrease in mobility	53 (2.10)	341 (2.11)	
Almost dependent	13 (0.51)	113 (0.7)	
In bed	0	7 (0.04)	
Rosser Index, median (Q1-Q3)	98.6 (97.3-99.5)	98.6 (98.6-99.5)	0.041
Occupation, n (%)	-	-	0.179
Active	1,270 (50.24)	9,212 (57.10)	
Housework	708 (28.01)	3,728 (23.11)	
Retired	518 (20.49)	2,790 (17.29)	
Student	32 (1.27)	404 (2.50)	
Diagnoses, n (%)	-	-	-
Axial neuropathy	90 (3.56)	445 (2.76)	0.046
Back pain	286 (11.31)	2,677 (16.59)	0.153
Chronic polyarthritis	234 (9.26)	181 (1.12)	0.373
Crystal arthropathy	93 (3.68)	452 (2.8)	0.05
Fibromyalgia	47 (1.86)	178 (1.1)	0.063
Gout	73 (2.89)	290 (1.8)	0.072
Muscle disorders	64 (2.53)	701 (4.34)	0.1
Neck pain	108 (4.27)	1,071 (6.64)	0.104
No diagnoses	182 (7.2)	2,154 (13.35)	0.204
Generalized or Unspecified Osteoarthritis	172 (6.8)	1,074 (6.66)	0.006
Osteoarthritis of first carpometacarpal joints	53 (2.1)	383 (2.37)	0.019
Osteoarthritis of hand	82 (3.24)	869 (5.39)	0.106
Osteoarthritis of hip	42 (1.66)	293 (1.82)	0.012
Osteoarthritis of knee	279 (11.04)	1,536 (9.52)	0.05
Osteoporosis	74 (2.93)	359 (2.23)	0.044
Osteoporosis fracture	77 (3.05)	232 (1.44)	0.109
Other connective tissue inflammatory diseases	121 (4.79)	214 (1.33)	0.202
Other non-inflammatory diseases	43 (1.7)	396 (2.45)	0.053

Pain in joint	156 (6.17)	1,953 (12.1)	0.207
Peripheral neuropathy	91 (3.6)	415 (2.57)	0.059
Spondyloarthropathies	70 (2.77)	77 (0.48)	0.182
Tendinitis	99 (3.92)	712 (4.41)	0.025
Tendinitis lower extremities	237 (9.38)	1,175 (7.28)	0.076
Tendinitis upper extremities	455 (18)	2,591 (16.06)	0.052
Treatment, n (%)	-	-	-
Analgesic 1st level	921 (36.43)	5,658 (35.07)	0.028
Analgesic 2nd and 3rd level	284 (11.23)	1,274 (7.9)	0.114
Antidepressant	48 (1.9)	184 (1.14)	0.062
Antiosteoporotic	116 (4.59)	325 (2.01)	0.144
Benzodiazepine	166 (6.57)	1,227 (7.61)	0.04
Calcium and vitamin D	268 (10.6)	787 (4.88)	0.215
Colchicine	67 (2.65)	208 (1.29)	0.098
Corticosteroid	368 (14.56)	640 (3.97)	0.372
Gabapentin	60 (2.37)	290 (1.8)	0.04
Gastric protector	437 (17.29)	2,225 (13.79)	0.097
Lowering uric acid drugs	31 (1.23)	103 (0.64)	0.061
NSAIDs	803 (31.76)	5,239 (32.47)	0.015
NSAIDs hard	40 (1.58)	161 (1)	0.052
Other DMARDs	197 (7.79)	44 (0.27)	0.389
Other drugs	51 (2.02)	207 (1.28)	0.058
SYSADOA	37 (1.46)	320 (1.98)	0.04

NSAIDs: Nonsteroidal anti-inflammatory drugs; SYSADOA: Symptomatic Slow Action Drugs for Osteoarthritis; DMARDs: Disease-Modifying Anti-rheumatic drugs

Supplementary Table 6.6: Demographic and clinical-related characteristics at discharge of the patients included in the Hospital Clínico San Carlos musculoskeletal cohort, based on their readmission or not to the clinic. All diseases and treatments were included in this table, except for those included in Table 3.1. Differences are expressed as Standardized Mean Differences

Variables	With outpatient readmission n = 2,528	Without outpatient readmission n = 16,134	Standardized Mean Difference
Diagnoses, n (%)	-	-	-
Axial neuropathy	92 (3.64)	448 (2.78)	0.049
Chronic polyarthritis	235 (9.3)	157 (0.97)	0.384
Crystal arthropathy	89 (3.52)	406 (2.52)	0.059
Fibromyalgia	57 (2.25)	192 (1.19)	0.082
Gout	74 (2.93)	295 (1.83)	0.072
Muscle disorders	62 (2.45)	713 (4.42)	0.108
Neck pain	111 (4.39)	1,073 (6.65)	0.099
Generalized or Unspecified Osteoarthritis	185 (7.32)	1,158 (7.18)	0.005
Osteoarthritis of first carpometacarpal joints	55 (2.18)	409 (2.54)	0.024
Osteoarthritis of hand	83 (3.28)	888 (5.5)	0.109
Osteoarthritis of hip	51 (2.02)	321 (1.99)	0.002
Osteoporosis	85 (3.36)	374 (2.32)	0.063
Osteoporosis fracture	95 (3.76)	274 (1.7)	0.127
Other connective tissue inflammatory diseases	129 (5.1)	210 (1.3)	0.217
Other non-inflammatory diseases	47 (1.86)	420 (2.6)	0.05
Peripheral neuropathy	86 (3.4)	424 (2.63)	0.045
Spondyloarthropathies	76 (3.01)	77 (0.48)	0.194
Tendinitis	104 (4.11)	730 (4.52)	0.02
Treatment, n (%)	-	-	-
Antidepressant	56 (2.22)	199 (1.23)	0.075
Antiosteoporotic	159 (6.29)	389 (2.41)	0.191
Colchicine	74 (2.93)	207 (1.28)	0.115
Corticosteroid	353 (13.96)	482 (2.99)	0.402
Gabapentin	71 (2.81)	314 (1.95)	0.057
Lowering uric acid drugs	42 (1.66)	149 (0.92)	0.065
NSAIDs hard	39 (1.54)	149 (0.92)	0.056
Other DMARDs	246 (9.73)	51 (0.32)	0.441
Other drugs	73 (2.89)	229 (1.42)	0.101
SYSADOA	45 (1.78)	365 (2.26)	0.034
Other	-	-	-
Follow-up days until discharge since last discharge	0 (0-75)	0 (0-0)	0.175
Number of diagnoses given in each discharge	1 (1–1)	1 (1–1)	0.060
Number of treatments given in each discharge	2 (1-3)	1 (0-2)	0.393

Number of discharges given until current discharge	1 (1–2)	1 (1-1)	0.505
Number of visits since the last time a discharge was given, until new discharge. If there is no previous discharge, it is the number of visits until discharge, from first visit in clinic (relative visit number)	1 (1-2)	1 (1-2)	0.334
Number of visits from first visit in the outpatient clinic until discharge.	2 (1-4)	1 (1-2)	0.530

NSAIDs: Nonsteroidal anti-inflammatory drugs; SYSADOA: Symptomatic Slow Action Drugs for Osteoarthritis; DMARDs: Disease-Modifying Anti-rheumatic drugs

Supplementary Table 6.7: Mean and median values of the RCI, and disability and pain/ distress subscales, of the visits carried out in the last 90 or 182 days before dis-charge, of the patients included in the Hospital Clínico San Carlos musculoskeletal cohort, based on their readmission or not to the clinic. Differences are expressed as Standardized Mean Differences

Variables	With outpatient readmission n = 2,528	Without outpatient readmission n = 16,134	Standardized Mean Difference
Distress, median (Q1-Q3)	-	-	-
90c	1 (1-1)	1 (1-1)	0.161
90w	1 (1-1)	1 (1-1)	0.154
182c	1 (1-1)	1 (1-1)	0.154
182w	1 (1-1)	1 (1-1)	0.142
Disability, median (Q1-Q3)	-	-	-
90c	2 (1-2)	2 (1-2)	0.154
90w	2 (1-2)	2 (1-2)	0.151
182c	2 (1-2)	2 (1-2)	0.153
182w	2 (1-2)	2 (1-2)	0.152
Rosser, median (Q1-Q3)	-	-	-
90c	0.986 (0.976–0.995)	0.986 (0.986–0.995)	0.026
90w	0.986 (0.973-0.995)	0.986 (0.986-0.995)	0.028
182c	0.986 (0.976–0.995)	0.986 (0.986-0.995)	0.026
182w	0.986 (0.973-0.995)	0.986 (0.986-0.995)	0.028
Distress, mean	-	-	-
90c	1 (1-1)	1 (1-1)	0.157
90w	1 (1-1)	1 (1-1)	0.152
182c	1 (1-1)	1 (1-1)	0.155
182w	1 (1-1)	1 (1-1)	0.142
Disability, mean	-	-	-
90c	2 (1-2)	2 (1-2)	0.150
90w	2 (1-2)	2 (1-2)	0.149
182c	2 (1-2)	2 (1-2)	0.155
182w	2 (1-2)	2 (1-2)	0.151
Rosser, mean	-	-	-
90c	0.986 (0.977–0.995)	0.986 (0.986–0.995)	0.025
90w	0.986 (0.973-0.995)	0.986 (0.986-0.995)	0.027
182c	0.986 (0.976–0.995)	0.986 (0.986–0.995)	0.028
182w	0.986 (0.973-0.995)	0.986 (0.986-0.995)	0.030

90c: health status information in the last 90 days, including current discharge visit. 90w: health status information in the last 90 days, excluding current discharge visit. 182c: health status information in the last 182 days, including current discharge visit. 182w: health status information in the last 182 days, excluding current discharge visit

Supplementary Table 6.8: Diagnosis given, and treatment prescribed during the visits taking place in the 90 days before discharge of the patients included in the Hospital Clínico San Carlos musculoskeletal cohort, based on their readmission or not to the clinic. Differences are expressed as Standardized Mean Differences

Variables	With outpatient readmission n = 2,528	Without outpatient readmission n = 16,134	Standardized Mean Difference
Diagnoses, n (%)	-	-	-
Axial neuropathy	96 (3.8)	477 (2.96)	0.047
Back pain	343 (13.57)	2,829 (17.53)	0.11
Chronic polyarthritis	249 (9.85)	175 (1.08)	0.393
Crystal arthropathy	103 (4.07)	474 (2.94)	0.062
Fibromyalgia	58 (2.29)	197 (1.22)	0.082
Gout	75 (2.97)	307 (1.9)	0.069
Muscle disorders	71 (2.81)	738 (4.57)	0.094
Neck pain	116 (4.59)	1,104 (6.84)	0.097
No diagnoses	164 (6.49)	2,129 (13.2)	0.227
Generalized or Unspecified Osteoarthritis	200 (7.91)	1,183 (7.33)	0.022
Osteoarthritis of first carpometacarpal joints	61 (2.41)	421 (2.61)	0.013
Osteoarthritis of hand	87 (3.44)	910 (5.64)	0.106
Osteoarthritis of hip	56 (2.22)	333 (2.06)	0.01
Osteoarthritis of knee	316 (12.5)	1,706 (10.57)	0.06
Osteoporosis	89 (3.52)	385 (2.39)	0.067
Osteoporosis fracture	99 (3.92)	278 (1.72)	0.133
Other connective tissue inflammatory diseases	130 (5.14)	222 (1.38)	0.213
Other non-inflammatory diseases	55 (2.18)	455 (2.82)	0.041
Pain in joint	161 (6.37)	2,035 (12.61)	0.214
Peripheral neuropathy	92 (3.64)	457 (2.83)	0.046
Spondyloarthropathies	79 (3.12)	90 (0.56)	0.192
Tendinitis	113 (4.47)	778 (4.82)	0.017
Tendinitis lower extremities	264 (10.44)	1,253 (7.77)	0.093
Tendinitis upper extremities	494 (19.54)	2,680 (16.61)	0.076
Treatment, n (%)	-	-	-
Analgesic 1st level	1,048 (41.46)	6,101 (37.81)	0.074
Analgesic 2nd and 3rd level	345 (13.65)	1,450 (8.99)	0.147
Antidepressant	58 (2.29)	205 (1.27)	0.077
Antiosteoporotic	160 (6.33)	399 (2.47)	0.189
Benzodiazepine	178 (7.04)	1,268 (7.86)	0.031
Calcium and vitamin D	355 (14.04)	1,027 (6.37)	0.256
Colchicine	79 (3.12)	227 (1.41)	0.116
Corticosteroid	396 (15.66)	635 (3.94)	0.402
Gabapentin	77 (3.05)	342 (2.12)	0.058
Gastric protector	492 (19.46)	2,260 (14.01)	0.147
Lowering uric acid drugs	42 (1.66)	149 (0.92)	0.065
NSAIDs	885 (35.01)	5,462 (33.85)	0.024

NSAIDs hard	42 (1.66)	163 (1.01)	0.057
Other DMARDs	249 (9.85)	61 (0.38)	0.44
Other drugs	85 (3.36)	263 (1.63)	0.111
SYSADOA	46 (1.82)	367 (2.27)	0.032

NSAIDs: Nonsteroidal anti-inflammatory drugs; SYSADOA: Symptomatic Slow Action Drugs for Osteoarthritis; DMARDs: Disease-Modifying Anti-rheumatic drugs

Supplementary Table 6.9: Diagnosis given, and treatment prescribed during the visits taking place in the 182 days before discharge of the patients included in the Hospital Clínico San Carlos musculoskeletal cohort, based on their readmission or not to the clinic. Differences are expressed as Standardized Mean Differences

Variables	With outpatient readmission n = 2,528	Without outpatient readmission n = 16,134	Standardized Mean Difference
Diagnoses, n (%)	-	-	-
Axial neuropathy	97 (3.84)	491 (3.04)	0.044
Back pain	353 (13.96)	2,855 (17.7)	0.102
Chronic polyarthritis	256 (10.13)	184 (1.14)	0.397
Crystal arthropathy	106 (4.19)	488 (3.02)	0.063
Fibromyalgia	59 (2.33)	199 (1.23)	0.083
Gout	75 (2.97)	308 (1.91)	0.069
Muscle disorders	80 (3.16)	750 (4.65)	0.077
Neck pain	121 (4.79)	1,120 (6.94)	0.092
No diagnoses	188 (7.44)	2,198 (13.62)	0.203
Generalized or Unspecified Osteoarthritis	206 (8.15)	1,192 (7.39)	0.028
Osteoarthritis of first carpometacarpal joints	62 (2.45)	425 (2.63)	0.012
Osteoarthritis of hand	91 (3.6)	915 (5.67)	0.099
Osteoarthritis of hip	59 (2.33)	338 (2.09)	0.016
Osteoarthritis of knee	319 (12.62)	1,716 (10.64)	0.062
Osteoporosis	89 (3.52)	388 (2.4)	0.066
Osteoporosis fracture	100 (3.96)	281 (1.74)	0.133
Other connective tissue inflammatory diseases	132 (5.22)	230 (1.43)	0.213
Other non-inflammatory diseases	56 (2.22)	462 (2.86)	0.041
Pain in joint	173 (6.84)	2,085 (12.92)	0.205
Peripheral neuropathy	96 (3.8)	474 (2.94)	0.048
Spondyloarthropathies	82 (3.24)	96 (0.6)	0.194
Tendinitis	117 (4.63)	791 (4.9)	0.013
Tendinitis lower extremities	273 (10.8)	1,290 (8)	0.096
Tendinitis upper extremities	499 (19.74)	2,710 (16.8)	0.076
Treatment, n (%)	-	-	-
Analgesic 1st level	1,058 (41.85)	6,151 (38.12)	0.076
Analgesic 2nd and 3rd level	360 (14.24)	1,478 (9.16)	0.159
Antidepressant	60 (2.37)	215 (1.33)	0.077
Antiosteoporotic	166 (6.57)	402 (2.49)	0.197
Benzodiazepine	191 (7.56)	1,300 (8.06)	0.019
Calcium and vitamin D	364 (14.4)	1,042 (6.46)	0.262
Colchicine	84 (3.32)	245 (1.52)	0.118
Corticosteroid	421 (16.65)	692 (4.29)	0.412
Gabapentin	81 (3.2)	358 (2.22)	0.061
Gastric protector	508 (20.09)	2,310 (14.32)	0.154
Lowering uric acid drugs	43 (1.7)	150 (0.93)	0.068
NSAIDs	911 (36.04)	5,562 (34.47)	0.033

NSAIDs hard	46 (1.82)	170 (1.05)	0.064
Other DMARDs	254 (10.05)	69 (0.43)	0.442
Other drugs	92 (3.64)	275 (1.7)	0.12
SYSADOA	47 (1.86)	371 (2.3)	0.031

NSAIDs: Nonsteroidal anti-inflammatory drugs; SYSADOA: Symptomatic Slow Action Drugs for Osteoarthritis; DMARDs: Disease-Modifying Anti-rheumatic drugs

Supplementary Table 6.10: Comorbidities and concomitant medication present at discharge, of the patients included in the Hospital Clínico San Carlos musculoskeletal cohort, based on their readmission or not to the clinic. All comorbidities were included in this table, except for those included in Table 3.1. Differences are expressed as Standardized Mean Differences

Variables	With outpatient readmission n = 2,528	Without outpatient readmission n = 16,134	Standardized Mean Difference
Comorbidities and concomitant treatments, n (%)	-	-	-
Alcoholic habit	37 (1.46)	272 (1.69)	0.018
Allergy	54 (2.14)	289 (1.79)	0.025
Allergy medication	26 (1.03)	154 (0.95)	0.007
Alpha-blocker	21 (0.83)	124 (0.77)	0.007
Ambiental allergy	47 (1.86)	273 (1.69)	0.013
Anemia	35 (1.38)	189 (1.17)	0.019
Angiotensin II receptor blocker	212 (8.39)	1,122 (6.95)	0.054
Angiotensin-converting-enzyme inhibitor	38 (9.41)	1,242 (7.7)	0.061
Antiaggregant	216 (8.54)	939 (5.82)	0.106
Anticoagulant	87 (3.44)	501 (3.11)	0.019
Antidepressant	198 (7.83)	1,059 (6.56)	0.049
Antiepileptics	31 (1.23)	139 (0.86)	0.036
Anxiety	48 (1.9)	309 (1.92)	0.001
Anxiety medication	228 (9.02)	1,120 (6.94)	0.077
Appendicitis	61 (2.41)	440 (2.73)	0.02
Articular prosthesis	94 (3.72)	488 (3.02)	0.038
Articular surgery no prosthesis	14 (0.55)	89 (0.55)	0
Asthma	69 (2.73)	361 (2.24)	0.032
Atrial fibrillation	51 (2.02)	340 (2.11)	0.006
Axial neuropathy	28 (1.11)	98 (0.61)	0.054
Back pain	78 (3.09)	392 (2.43)	0.04
Benign breast tumor	26 (1.03)	148 (0.92)	0.011
Benign prostatic hyperplasia medication	49 (1.94)	243 (1.51)	0.033
Benign prostatic hypertrophy	50 (1.98)	363 (2.25)	0.019
Benzodiazepine	224 (8.86)	1,091 (6.76)	0.078
Beta-blocker	138 (5.46)	707 (4.38)	0.05
Bisphosphonates	80 (3.16)	425 (2.63)	0.032
Breast cancer	40 (1.58)	235 (1.46)	0.01
Bronchodilator	59 (2.33)	305 (1.89)	0.031
Calcium	177 (7)	831 (5.15)	0.078
Calcium antagonist	139 (5.5)	762 (4.72)	0.035
Cancer	68 (2.69)	436 (2.7)	0.001
Cancer medication	45 (1.78)	218 (1.35)	0.035
Cataract	65 (2.57)	305 (1.89)	0.046
Central nervous system diseases	35 (1.38)	266 (1.65)	0.022
Cerebrovascular disease	37 (1.46)	222 (1.38)	0.007
Cervicalgia	27 (1.07)	151 (0.94)	0.013
Cholecystectomy	85 (3.36)	414 (2.57)	0.047

Chronic obstructive pulmonary disease	41 (1.62)	285 (1.77)	0.011
Cognitive impairment	14 (0.55)	100 (0.62)	0.009
Colon cancer	20 (0.79)	91 (0.56)	0.028
Colon diverticulitis	22 (0.87)	105 (0.65)	0.025
Colon hemorrhoid	14 (0.55)	96 (0.6)	0.005
Colon surgery	20 (0.79)	143 (0.89)	0.01
Column surgery	62 (2.45)	271 (1.68)	0.054
Connective tissue benign tumor	35 (1.38)	197 (1.22)	0.014
Constipation	27 (1.07)	152 (0.94)	0.013
Contraception	9 (0.36)	123 (0.76)	0.055
Cystocele	22 (0.87)	106 (0.66)	0.024
Digoxin	8 (0.32)	97 (0.6)	0.042
Disease modifying antirheumatic drugs	15 (0.59)	101 (0.63)	0.004
Diuretic	289 (11.43)	1,449 (8.98)	0.081
Fall	16 (0.63)	99 (0.61)	0.002
Family history	23 (0.91)	98 (0.61)	0.035
Feet diseases	59 (2.33)	323 (2)	0.023
Gabapentin	51 (2.02)	240 (1.49)	0.04
Gastritis	24 (0.95)	173 (1.07)	0.012
Glaucoma	39 (1.54)	162 (1)	0.048
Gout	11 (0.44)	116 (0.72)	0.037
Hand diseases	37 (1.46)	191 (1.18)	0.024
Helicobacter pylori infection	20 (0.79)	99 (0.61)	0.021
Hematopoietic cancer	20 (0.79)	97 (0.6)	0.023
Hiatal hernia	71 (2.81)	415 (2.57)	0.015
Hip prosthesis	18 (0.71)	122 (0.76)	0.005
Hyperglycemia	31 (1.23)	153 (0.95)	0.027
Hyperthyroidism	14 (0.55)	90 (0.56)	0.001
Hyperuricemia	29 (1.15)	212 (1.31)	0.015
Hysterectomy surgery	69 (2.73)	461 (2.86)	0.008
Inhaled corticosteroid	53 (2.1)	271 (1.68)	0.031
Insomnia	23 (0.91)	80 (0.5)	0.05
Insulin	58 (2.29)	309 (1.92)	0.026
Internal derangement of knee	43 (1.7)	234 (1.45)	0.02
Iron	28 (1.11)	140 (0.87)	0.024
Irritable colon syndrome	18 (0.71)	113 (0.7)	0.001
Ischemic heart disease	68 (2.69)	451 (2.8)	0.006
Kidney failure	40 (1.58)	195 (1.21)	0.032
Knee arthrosis	15 (0.59)	126 (0.78)	0.023
Knee surgery non prosthesis	53 (2.1)	279 (1.73)	0.027
Knee surgery prosthesis	34 (1.34)	184 (1.14)	0.018
Lowering uric acid drugs	39 (1.54)	256 (1.59)	0.004
Macrocytosis	14 (0.55)	90 (0.56)	0.001
Metamizole	37 (1.46)	115 (0.71)	0.072
Migraine	29 (1.15)	239 (1.48)	0.029
Non osteoporotic fracture	44 (1.74)	262 (1.62)	0.009
NSAIDs	56 (2.22)	237 (1.47)	0.056
Ocular hypertension medication	37 (1.46)	162 (1)	0.042
Oral anticoagulant	85 (3.36)	496 (3.07)	0.016
Oral antidiabetics	198 (7.83)	976 (6.05)	0.07
Osteoporosis	94 (3.72)	499 (3.09)	0.034

Osteoporotic fracture	48 (1.9)	258 (1.6)	0.023
Other antihypertensives	78 (3.09)	479 (2.97)	0.007
Other arrhythmias	89 (3.52)	555 (3.44)	0.004
Other articular surgeries	93 (3.68)	462 (2.86)	0.046
Other benign tumors	40 (1.58)	169 (1.05)	0.047
Other biliary diseases	106 (4.19)	485 (3.01)	0.064
Other colon diseases	42 (1.66)	196 (1.21)	0.038
Other dermatological diseases	39 (1.54)	235 (1.46)	0.007
Other digestive diseases	70 (2.77)	420 (2.6)	0.01
Other ear diseases	35 (1.38)	193 (1.2)	0.017
Other endocrine diseases	53 (2.1)	228 (1.41)	0.052
Other esophagus diseases	58 (2.29)	362 (2.24)	0.003
Other eyes diseases	39 (1.54)	217 (1.34)	0.017
Other heart diseases	25 (0.99)	104 (0.64)	0.038
Other hematologic diseases	48 (1.9)	257 (1.59)	0.023
Other hip diseases	16 (0.63)	98 (0.61)	0.003
Other infection	62 (2.45)	296 (1.83)	0.043
Other knee disease	21 (0.83)	88 (0.55)	0.035
Other liver disease	35 (1.38)	195 (1.21)	0.016
Other musculoskeletal infection	53 (2.1)	311 (1.93)	0.012
Other neurological diseases	18 (0.71)	109 (0.68)	0.004
Other otorhinolaryngology diseases	41 (1.62)	277 (1.72)	0.007
Other ovary diseases	26 (1.03)	152 (0.94)	0.009
Other psychiatric conditions	25 (0.99)	138 (0.86)	0.014
Other respiratory diseases	18 (0.71)	99 (0.61)	0.012
Other spine diseases	33 (1.31)	185 (1.15)	0.014
Other urological diseases	12 (0.47)	109 (0.68)	0.027
Other uterus diseases	72 (2.85)	389 (2.41)	0.027
Other valve diseases	36 (1.42)	177 (1.1)	0.029
Other virus infection	60 (2.37)	358 (2.22)	0.01
Paracetamol	90 (3.56)	396 (2.45)	0.065
Parkinson's disease	10 (0.4)	92 (0.57)	0.025
Peptic ulcer	43 (1.7)	227 (1.41)	0.024
Peripheral artery disease	16 (0.63)	118 (0.73)	0.012
Peripheral nervous system diseases	80 (3.16)	358 (2.22)	0.058
Pregnancy	35 (1.38)	312 (1.93)	0.043
Prostate cancer	20 (0.79)	97 (0.6)	0.023
Proton-pump inhibitor medication	255 (10.09)	1,343 (8.32)	0.061
Psoriasis	41 (1.62)	185 (1.15)	0.041
Pulmonary embolism or deep vein thrombosis	29 (1.15)	105 (0.65)	0.053
Salpingectomy and oophorectomy	38 (1.5)	245 (1.52)	0.001
Second and third analgesia level	63 (2.49)	305 (1.89)	0.041
Shoulder diseases	28 (1.11)	148 (0.92)	0.019
Sleep apnea	20 (0.79)	86 (0.53)	0.032
Smoking habit	64 (2.53)	573 (3.55)	0.059
Statins	548 (21.68)	2,807 (17.4)	0.108
Stomach bowel disease	16 (0.63)	91 (0.56)	0.009
Symptomatic slow action drugs for osteoarthritis	40 (1.58)	175 (1.08)	0.043
Thyroid hormone	190 (7.52)	999 (6.19)	0.052
Thyroid nodule	11 (0.44)	98 (0.61)	0.024

Thyroid others	22 (0.87)	137 (0.85)	0.002
Thyroidectomy	28 (1.11)	187 (1.16)	0.005
Tonsillectomy	33 (1.31)	211 (1.31)	0
Tuberculosis infection	14 (0.55)	94 (0.58)	0.004
Unspecified arthrosis	23 (0.91)	130 (0.81)	0.011
Urological obstruction	22 (0.87)	215 (1.33)	0.044
Urological surgery	32 (1.27)	165 (1.02)	0.023
Venous insufficiency peripheral	59 (2.33)	374 (2.32)	0.001
Viral hepatitis	29 (1.15)	215 (1.33)	0.017
Vitamins	22 (0.87)	125 (0.77)	0.011

NSAIDs: Nonsteroidal anti-inflammatory drugs; ACE: Angiotensin-converting enzyme; ARBs: Angiotensin II receptor blocker, DMARDs: Disease-Modifying Antirheumatic drugs

Supplementary Table 6.11: Demographic, clinical, and comorbidities-related characteristics at first visit in the clinic, at the first visit of each episode, at discharge, and at any visit taking place in the previous 90 or 182 days before discharge, of the patients included in the Hospital Clínico San Carlos musculoskeletal cohort used to develop a prediction model of outpatient readmission, based on their inclusion in the training, validation or test datasets. Differences are expressed as Standardized Mean Differences

Predictor	TR	VL	TS	TR-VL	TR-TS	VL-TS
Diagnosis at first visit in clinic	-	-	-	-	-	-
Axial neuropathy	365 (2.81)	71 (2.68)	88 (2.89)	0.008	0.005	0.012
Back pain	2,030 (15.65)	433 (16.37)	469 (15.4)	0.02	0.007	0.027
Chronic polyarthritis	294 (2.27)	41 (1.55)	54 (1.77)	0.052	0.035	0.017
Crystal arthropathy	361 (2.78)	84 (3.18)	97 (3.18)	0.023	0.024	0
Fibromyalgia	150 (1.16)	30 (1.13)	29 (0.95)	0.002	0.02	0.018
Gout	265 (2.04)	51 (1.93)	46 (1.51)	0.008	0.04	0.032
Muscle disorders	531 (4.09)	111 (4.2)	124 (4.07)	0.005	0.001	0.006
Neck pain	916 (7.06)	142 (5.37)	166 (5.45)	0.07	0.067	0.004
No diagnoses	1,807 (13.93)	345 (13.04)	388 (12.74)	0.026	0.035	0.009
Generalized or Unspecified Osteoarthritis	900 (6.94)	143 (5.41)	194 (6.37)	0.064	0.023	0.041
Osteoarthritis of first carpometacarpal joints	312 (2.41)	57 (2.16)	68 (2.23)	0.017	0.011	0.005
Osteoarthritis of hand	682 (5.26)	125 (4.73)	139 (4.56)	0.024	0.032	0.008
Osteoarthritis of hip	212 (1.63)	46 (1.74)	57 (1.87)	0.008	0.018	0.01
Osteoarthritis of knee	1,184 (9.13)	228 (8.62)	296 (9.72)	0.018	0.02	0.038
Osteoporosis	319 (2.46)	50 (1.89)	50 (1.64)	0.039	0.058	0.019
Osteoporosis fracture	216 (1.67)	35 (1.32)	40 (1.31)	0.028	0.029	0.001
Other connective tissue inflammatory diseases	227 (1.75)	43 (1.63)	42 (1.38)	0.01	0.03	0.02
Other non-inflammatory diseases	242 (1.87)	72 (2.72)	98 (3.22)	0.057	0.086	0.029
Pain in joint	1,460 (11.26)	318 (12.02)	354 (11.62)	0.024	0.011	0.012
Peripheral neuropathy	335 (2.58)	65 (2.46)	98 (3.22)	0.008	0.038	0.046
Spondyloarthropathies	112 (0.86)	9 (0.34)	12 (0.39)	0.068	0.059	0.009
Tendinitis	535 (4.12)	116 (4.39)	169 (5.55)	0.013	0.066	0.054
Tendinitis lower extremities	866 (6.68)	226 (8.54)	248 (8.14)	0.07	0.056	0.015
Tendinitis upper extremities	2,003 (15.44)	470 (17.77)	544 (17.86)	0.063	0.065	0.002
Treatment at first visit in clinic	-	-	-	-	-	-
Analgesic 1st level	4,388 (33.83)	878 (33.19)	1,003 (32.93)	0.013	0.019	0.006
Analgesic 2nd and 3rd level	1,028 (7.93)	172 (6.5)	210 (6.89)	0.055	0.039	0.016
Antidepressant	133 (1.03)	29 (1.1)	38 (1.25)	0.007	0.021	0.014
Antiosteoporotic	302 (2.33)	35 (1.32)	30 (0.98)	0.075	0.105	0.032
Benzodiazepine	1,017 (7.84)	168 (6.35)	183 (6.01)	0.058	0.072	0.014
Calcium and vitamin D	675 (5.2)	128 (4.84)	120 (3.94)	0.017	0.061	0.044
Colchicine	167 (1.29)	37 (1.4)	38 (1.25)	0.01	0.004	0.013

Corticosteroid	644 (4.96)	122 (4.61)	152 (4.99)	0.017	0.001	0.018
Gabapentin	205 (1.58)	52 (1.97)	57 (1.87)	0.029	0.022	0.007
Gastric protector	1,958 (15.1)	330 (12.48)	296 (9.72)	0.076	0.164	0.088
Lowering uric acid drugs	77 (0.59)	23 (0.87)	10 (0.33)	0.032	0.039	0.07
NSAIDs	4,187 (32.28)	827 (31.27)	908 (29.81)	0.022	0.053	0.032
NSAIDs hard	166 (1.28)	22 (0.83)	17 (0.56)	0.044	0.076	0.033
Other DMARDs	116 (0.89)	8 (0.3)	10 (0.33)	0.077	0.073	0.005
Other drugs	162 (1.25)	18 (0.68)	43 (1.41)	0.058	0.014	0.072
SYSADOA	243 (1.87)	45 (1.7)	43 (1.41)	0.013	0.036	0.023
Diagnosis at discharge	-	-	-	-	-	-
Axial neuropathy	375 (2.89)	77 (2.91)	88 (2.89)	0.001	0	0.001
Back pain	2,154 (16.61)	453 (17.13)	477 (15.66)	0.014	0.026	0.04
Chronic polyarthritis	325 (2.51)	29 (1.1)	38 (1.25)	0.106	0.093	0.014
Crystal arthropathy	333 (2.57)	78 (2.95)	84 (2.76)	0.023	0.012	0.011
Fibromyalgia	178 (1.37)	36 (1.36)	35 (1.15)	0.001	0.02	0.019
Gout	271 (2.09)	50 (1.89)	48 (1.58)	0.014	0.038	0.024
Muscle disorders	551 (4.25)	114 (4.31)	110 (3.61)	0.003	0.033	0.036
Neck pain	888 (6.85)	147 (5.56)	149 (4.89)	0.053	0.083	0.03
No diagnoses	1,419 (10.94)	288 (10.89)	321 (10.54)	0.002	0.013	0.011
Generalized or Unspecified Osteoarthritis	973 (7.5)	155 (5.86)	215 (7.06)	0.066	0.017	0.049
Osteoarthritis of first carpometacarpal joints	327 (2.52)	57 (2.16)	80 (2.63)	0.024	0.007	0.031
Osteoarthritis of hand	704 (5.43)	127 (4.8)	140 (4.6)	0.028	0.038	0.01
Osteoarthritis of hip	249 (1.92)	55 (2.08)	68 (2.23)	0.011	0.022	0.011
Osteoarthritis of knee	1,358 (10.47)	279 (10.55)	339 (11.13)	0.003	0.021	0.019
Osteoporosis	352 (2.71)	53 (2)	54 (1.77)	0.047	0.064	0.017
Osteoporosis fracture	282 (2.17)	48 (1.81)	39 (1.28)	0.026	0.069	0.043
Other connective tissue inflammatory diseases	250 (1.93)	45 (1.7)	44 (1.44)	0.017	0.038	0.021
Other non-inflammatory diseases	266 (2.05)	87 (3.29)	114 (3.74)	0.077	0.101	0.025
Pain in joint	1,408 (10.85)	295 (11.15)	317 (10.41)	0.01	0.015	0.024
Peripheral neuropathy	342 (2.64)	65 (2.46)	103 (3.38)	0.011	0.044	0.055
Spondyloarthropathies	132 (1.02)	8 (0.3)	13 (0.43)	0.088	0.07	0.021
Tendinitis	534 (4.12)	126 (4.76)	174 (5.71)	0.031	0.074	0.043
Tendinitis lower extremities	919 (7.09)	251 (9.49)	270 (8.86)	0.087	0.066	0.022
Tendinitis upper extremities	2,038 (15.71)	476 (18)	586 (19.24)	0.061	0.093	0.032
Treatment at discharge	-	-	-	-	-	-
Analgesic 1st level	4,828 (37.22)	1,022 (38.64)	1,138 (37.36)	0.029	0.003	0.026
Analgesic 2nd and 3rd level	1,178 (9.08)	241 (9.11)	290 (9.52)	0.001	0.015	0.014
Antidepressant	168 (1.3)	49 (1.85)	38 (1.25)	0.045	0.004	0.049
Antiosteoporotic	452 (3.48)	52 (1.97)	44 (1.44)	0.093	0.132	0.04
Benzodiazepine	1,017 (7.84)	161 (6.09)	175 (5.75)	0.069	0.083	0.014
Calcium and vitamin D	951 (7.33)	201 (7.6)	200 (6.57)	0.01	0.03	0.04
Colchicine	204 (1.57)	36 (1.36)	41 (1.35)	0.018	0.019	0.001
Corticosteroid	622 (4.8)	86 (3.25)	127 (4.17)	0.079	0.03	0.049
Gabapentin	235 (1.81)	70 (2.65)	80 (2.63)	0.057	0.055	0.001

Gastric protector	1,966 (15.16)	314 (11.87)	266 (8.73)	0.096	0.199	0.103
Lowering uric acid drugs	133 (1.03)	35 (1.32)	23 (0.76)	0.028	0.029	0.056
NSAIDs	4,240 (32.69)	842 (31.83)	904 (29.68)	0.018	0.065	0.047
NSAIDs hard	158 (1.22)	17 (0.64)	13 (0.43)	0.06	0.088	0.03
Other DMARDs	261 (2.01)	14 (0.53)	22 (0.72)	0.133	0.111	0.024
Other drugs	208 (1.6)	31 (1.17)	63 (2.07)	0.037	0.035	0.071
SYSADOA	305 (2.35)	49 (1.85)	56 (1.84)	0.035	0.036	0.001
Diagnosis registered in the last 90 days before discharge	-	-	-	-	-	-
Axial neuropathy	396 (3.05)	82 (3.1)	95 (3.12)	0.003	0.004	0.001
Back pain	2,204 (16.99)	469 (17.73)	499 (16.38)	0.02	0.016	0.036
Chronic polyarthritis	348 (2.68)	33 (1.25)	43 (1.41)	0.104	0.09	0.014
Crystal arthropathy	378 (2.91)	98 (3.71)	101 (3.32)	0.044	0.023	0.021
Fibromyalgia	182 (1.4)	37 (1.4)	36 (1.18)	0	0.02	0.019
Gout	282 (2.17)	51 (1.93)	49 (1.61)	0.017	0.042	0.024
Muscle disorders	569 (4.39)	121 (4.57)	119 (3.91)	0.009	0.024	0.033
Neck pain	914 (7.05)	152 (5.75)	154 (5.06)	0.053	0.084	0.031
No diagnoses	1,616 (12.46)	318 (12.02)	359 (11.79)	0.013	0.021	0.007
Generalized or Unspecified Osteoarthritis	1,004 (7.74)	158 (5.97)	221 (7.26)	0.07	0.018	0.052
Osteoarthritis of first carpometacarpal joints	338 (2.61)	63 (2.38)	81 (2.66)	0.014	0.003	0.018
Osteoarthritis of hand	718 (5.54)	133 (5.03)	146 (4.79)	0.023	0.034	0.011
Osteoarthritis of hip	263 (2.03)	57 (2.16)	69 (2.27)	0.009	0.016	0.007
Osteoarthritis of knee	1,378 (10.62)	289 (10.93)	355 (11.65)	0.01	0.033	0.023
Osteoporosis	363 (2.8)	56 (2.12)	55 (1.81)	0.044	0.066	0.022
Osteoporosis fracture	286 (2.2)	51 (1.93)	40 (1.31)	0.019	0.068	0.049
Other connective tissue inflammatory diseases	256 (1.97)	46 (1.74)	50 (1.64)	0.017	0.025	0.008
Other non-inflammatory diseases	287 (2.21)	100 (3.78)	123 (4.04)	0.092	0.105	0.013
Pain in joint	1,501 (11.57)	338 (12.78)	357 (11.72)	0.037	0.005	0.032
Peripheral neuropathy	360 (2.78)	77 (2.91)	112 (3.68)	0.008	0.051	0.043
Spondyloarthropathies	144 (1.11)	8 (0.3)	17 (0.56)	0.097	0.061	0.039
Tendinitis	566 (4.36)	140 (5.29)	185 (6.07)	0.043	0.077	0.034
Tendinitis lower extremities	964 (7.43)	266 (10.06)	287 (9.42)	0.093	0.072	0.021
Tendinitis upper extremities	2,085 (16.07)	487 (18.41)	602 (19.76)	0.062	0.096	0.034
Treatments registered in the last 90 days before discharge	-	-	-	-	-	-
Analgesic 1st level	4,927 (37.98)	1,046 (39.55)	1,176 (38.61)	0.032	0.013	0.019
Analgesic 2nd and 3rd level	1,232 (9.5)	258 (9.75)	305 (10.01)	0.009	0.017	0.009
Antidepressant	171 (1.32)	51 (1.93)	41 (1.35)	0.048	0.002	0.046
Antiosteoporotic	458 (3.53)	55 (2.08)	46 (1.51)	0.088	0.129	0.043
Benzodiazepine	1,076 (8.3)	176 (6.65)	194 (6.37)	0.062	0.074	0.012
Calcium and vitamin D	968 (7.46)	207 (7.83)	207 (6.8)	0.014	0.026	0.04
Colchicine	218 (1.68)	41 (1.55)	47 (1.54)	0.01	0.011	0.001

Corticosteroid	741 (5.71)	119 (4.5)	171 (5.61)	0.055	0.004	0.051
Gabapentin	254 (1.96)	75 (2.84)	90 (2.95)	0.057	0.064	0.007
Gastric protector	2,087 (16.09)	351 (13.27)	314 (10.31)	0.08	0.171	0.092
Lowering uric acid drugs	133 (1.03)	35 (1.32)	23 (0.76)	0.028	0.029	0.056
NSAIDs	4,458 (34.37)	900 (34.03)	989 (32.47)	0.007	0.04	0.033
NSAIDs hard	170 (1.31)	20 (0.76)	15 (0.49)	0.055	0.087	0.033
Other DMARDs	272 (2.1)	14 (0.53)	24 (0.79)	0.138	0.11	0.032
Other drugs	236 (1.82)	40 (1.51)	72 (2.36)	0.024	0.038	0.062
SYSADOA	306 (2.36)	50 (1.89)	57 (1.87)	0.033	0.034	0.001
Diagnosis registered in the last 182 days before discharge	-	-	-	-	-	-
Axial neuropathy	404 (3.11)	88 (3.33)	96 (3.15)	0.012	0.002	0.01
Back pain	2,229 (17.18)	473 (17.88)	506 (16.61)	0.018	0.015	0.034
Chronic polyarthritis	360 (2.78)	34 (1.29)	46 (1.51)	0.106	0.087	0.019
Crystal arthropathy	385 (2.97)	100 (3.78)	109 (3.58)	0.045	0.034	0.011
Fibromyalgia	185 (1.43)	37 (1.4)	36 (1.18)	0.002	0.022	0.019
Gout	283 (2.18)	51 (1.93)	49 (1.61)	0.018	0.042	0.024
Muscle disorders	583 (4.49)	123 (4.65)	124 (4.07)	0.007	0.021	0.028
Neck pain	927 (7.15)	157 (5.94)	157 (5.15)	0.049	0.083	0.034
No diagnoses	1,693 (13.05)	324 (12.25)	369 (12.11)	0.024	0.028	0.004
Generalized or Unspecified Osteoarthritis	1,015 (7.83)	159 (6.01)	224 (7.35)	0.072	0.018	0.054
Osteoarthritis of first carpometacarpal joints	341 (2.63)	63 (2.38)	83 (2.72)	0.016	0.006	0.022
Osteoarthritis of hand	727 (5.6)	133 (5.03)	146 (4.79)	0.026	0.037	0.011
Osteoarthritis of hip	270 (2.08)	58 (2.19)	69 (2.27)	0.008	0.013	0.005
Osteoarthritis of knee	1,387 (10.69)	290 (10.96)	358 (11.75)	0.009	0.034	0.025
Osteoporosis	366 (2.82)	56 (2.12)	55 (1.81)	0.045	0.068	0.022
Osteoporosis fracture	288 (2.22)	51 (1.93)	42 (1.38)	0.021	0.063	0.043
Other connective tissue inflammatory diseases	265 (2.04)	46 (1.74)	51 (1.67)	0.022	0.027	0.005
Other non-inflammatory diseases	290 (2.24)	103 (3.89)	125 (4.1)	0.096	0.107	0.011
Pain in joint	1,533 (11.82)	355 (13.42)	370 (12.15)	0.048	0.01	0.038
Peripheral neuropathy	373 (2.88)	81 (3.06)	116 (3.81)	0.011	0.052	0.041
Spondyloarthropathies	152 (1.17)	9 (0.34)	17 (0.56)	0.096	0.066	0.033
Tendinitis	577 (4.45)	141 (5.33)	190 (6.24)	0.041	0.08	0.039
Tendinitis lower extremities	993 (7.66)	275 (10.4)	295 (9.68)	0.096	0.072	0.024
Tendinitis upper extremities	2,102 (16.21)	499 (18.87)	608 (19.96)	0.07	0.098	0.028
Treatments registered in the last 182 days before discharge	-	-	-	-	-	-
Analgesic 1st level	4,965 (38.28)	1,061 (40.11)	1,183 (38.84)	0.038	0.012	0.026
Analgesic 2nd and 3rd level	1,267 (9.77)	261 (9.87)	310 (10.18)	0.003	0.014	0.01
Antidepressant	176 (1.36)	56 (2.12)	43 (1.41)	0.058	0.005	0.054
Antiosteoporotic	466 (3.59)	56 (2.12)	46 (1.51)	0.089	0.132	0.046
Benzodiazepine	1,109 (8.55)	183 (6.92)	199 (6.53)	0.061	0.076	0.015

Calcium and vitamin D	989 (7.62)	210 (7.94)	207 (6.8)	0.012	0.032	0.044
Colchicine	232 (1.79)	46 (1.74)	51 (1.67)	0.004	0.009	0.005
Corticosteroid	795 (6.13)	133 (5.03)	185 (6.07)	0.048	0.002	0.046
Gabapentin	267 (2.06)	80 (3.02)	92 (3.02)	0.061	0.061	0
Gastric protector	2,130 (16.42)	365 (13.8)	323 (10.6)	0.073	0.171	0.098
Lowering uric acid drugs	135 (1.04)	35 (1.32)	23 (0.76)	0.026	0.03	0.056
NSAIDs	4,531 (34.93)	931 (35.2)	1,011 (33.19)	0.006	0.037	0.042
NSAIDs hard	180 (1.39)	21 (0.79)	15 (0.49)	0.057	0.093	0.038
Other DMARDs	279 (2.15)	18 (0.68)	26 (0.85)	0.125	0.107	0.02
Other drugs	249 (1.92)	44 (1.66)	74 (2.43)	0.019	0.035	0.054
SYSADOA	310 (2.39)	50 (1.89)	58 (1.9)	0.035	0.034	0.001
Diagnosis at first visit of episode	-	-	-	-	-	-
Axial neuropathy	374 (2.88)	73 (2.76)	88 (2.89)	0.007	0	0.008
Back pain	2,051 (15.81)	439 (16.6)	473 (15.53)	0.021	0.008	0.029
Chronic polyarthritis	326 (2.51)	37 (1.4)	52 (1.71)	0.081	0.056	0.025
Crystal arthropathy	353 (2.72)	92 (3.48)	100 (3.28)	0.044	0.033	0.011
Fibromyalgia	166 (1.28)	28 (1.06)	31 (1.02)	0.021	0.025	0.004
Gout	269 (2.07)	46 (1.74)	48 (1.58)	0.024	0.037	0.013
Muscle disorders	533 (4.11)	112 (4.23)	120 (3.94)	0.006	0.009	0.015
Neck pain	879 (6.78)	145 (5.48)	155 (5.09)	0.054	0.072	0.018
No diagnoses	1,656 (12.77)	318 (12.02)	362 (11.88)	0.023	0.027	0.004
Generalized or Unspecified Osteoarthritis	907 (6.99)	144 (5.44)	195 (6.4)	0.064	0.024	0.041
Osteoarthritis of first carpometacarpal joints	307 (2.37)	55 (2.08)	74 (2.43)	0.019	0.004	0.024
Osteoarthritis of hand	691 (5.33)	123 (4.65)	137 (4.5)	0.031	0.038	0.007
Osteoarthritis of hip	229 (1.77)	46 (1.74)	60 (1.97)	0.002	0.015	0.017
Osteoarthritis of knee	1,254 (9.67)	253 (9.57)	308 (10.11)	0.003	0.015	0.018
Osteoporosis	333 (2.57)	48 (1.81)	52 (1.71)	0.051	0.059	0.008
Osteoporosis fracture	234 (1.8)	35 (1.32)	40 (1.31)	0.039	0.04	0.001
Other connective tissue inflammatory diseases	244 (1.88)	46 (1.74)	45 (1.48)	0.011	0.031	0.021
Other non-inflammatory diseases	255 (1.97)	77 (2.91)	107 (3.51)	0.061	0.095	0.034
Pain in joint	1,442 (11.12)	324 (12.25)	343 (11.26)	0.035	0.005	0.031
Peripheral neuropathy	334 (2.57)	68 (2.57)	104 (3.41)	0	0.049	0.05
Spondyloarthropathies	126 (0.97)	9 (0.34)	12 (0.39)	0.078	0.07	0.009
Tendinitis	531 (4.09)	125 (4.73)	155 (5.09)	0.031	0.048	0.017
Tendinitis lower extremities	898 (6.92)	249 (9.41)	265 (8.7)	0.091	0.066	0.025
Tendinitis upper extremities	2,015 (15.53)	466 (17.62)	565 (18.55)	0.056	0.08	0.024
Treatment at first visit of episode	-	-	-	-	-	-
Analgesic 1st level	4,571 (35.24)	937 (35.43)	1,071 (35.16)	0.004	0.002	0.006
Analgesic 2nd and 3rd level	1,109 (8.55)	205 (7.75)	244 (8.01)	0.029	0.02	0.01
Antidepressant	155 (1.19)	39 (1.47)	38 (1.25)	0.024	0.005	0.02
Antiosteoporotic	364 (2.81)	41 (1.55)	36 (1.18)	0.086	0.116	0.032
Benzodiazepine	1,035 (7.98)	171 (6.47)	187 (6.14)	0.059	0.072	0.013

Calcium and vitamin D	786 (6.06)	137 (5.18)	132 (4.33)	0.038	0.078	0.04
Colchicine	193 (1.49)	42 (1.59)	40 (1.31)	0.008	0.015	0.023
Corticosteroid	723 (5.57)	123 (4.65)	162 (5.32)	0.042	0.011	0.031
Gabapentin	223 (1.72)	58 (2.19)	69 (2.27)	0.034	0.039	0.005
Gastric protector	2,009 (15.49)	338 (12.78)	315 (10.34)	0.078	0.154	0.076
Lowering uric acid drugs	102 (0.79)	21 (0.79)	11 (0.36)	0.001	0.056	0.057
NSAIDs	4,264 (32.87)	846 (31.98)	932 (30.6)	0.019	0.049	0.03
NSAIDs hard	164 (1.26)	19 (0.72)	18 (0.59)	0.055	0.07	0.016
Other DMARDs	217 (1.67)	637 (29.26)	12 (0.39)	0.119	0.127	0.009
Other drugs	181 (1.4)	12 (0.45)	52 (1.71)	0.042	0.025	0.067
SYSADOA	264 (2.04)	25 (0.95)	47 (1.54)	0.022	0.037	0.015
Comorbidities at discharge	-	-	-	-	-	-
Alcoholic habit	218 (1.68)	44 (1.66)	47 (1.54)	0.001	0.011	0.01
Allergy	214 (1.65)	58 (2.19)	71 (2.33)	0.04	0.049	0.009
Allergy medication	109 (0.84)	39 (1.47)	32 (1.05)	0.059	0.022	0.038
Alpha-blocker	99 (0.76)	20 (0.76)	26 (0.85)	0.001	0.01	0.011
Ambiental allergy	198 (1.53)	55 (2.08)	67 (2.2)	0.042	0.05	0.008
Anemia	164 (1.26)	30 (1.13)	30 (0.98)	0.012	0.027	0.015
Angiotensin II receptor blocker	914 (7.05)	179 (6.77)	241 (7.91)	0.011	0.033	0.044
Angiotensin-converting-enzyme inhibitor	987 (7.61)	224 (8.47)	269 (8.83)	0.032	0.044	0.013
Antiaggregant	836 (6.45)	143 (5.41)	176 (5.78)	0.044	0.028	0.016
Anticoagulant	402 (3.1)	83 (3.14)	103 (3.38)	0.002	0.016	0.014
Antidepressant	838 (6.46)	193 (7.3)	226 (7.42)	0.033	0.038	0.005
Antiepileptics	110 (0.85)	27 (1.02)	33 (1.08)	0.018	0.024	0.006
Anxiety	238 (1.83)	59 (2.23)	60 (1.97)	0.028	0.01	0.018
Anxiety medication	946 (7.29)	202 (7.64)	200 (6.57)	0.013	0.029	0.042
Appendicitis	360 (2.78)	63 (2.38)	78 (2.56)	0.025	0.013	0.012
Articular prosthesis	389 (3)	81 (3.06)	112 (3.68)	0.004	0.038	0.034
Articular surgery no prosthesis	69 (0.53)	14 (0.53)	20 (0.66)	0	0.016	0.017
Asthma	298 (2.3)	70 (2.65)	62 (2.04)	0.022	0.018	0.04
Atrial fibrillation	267 (2.06)	54 (2.04)	70 (2.3)	0.001	0.016	0.018
Axial neuropathy	88 (0.68)	19 (0.72)	19 (0.62)	0.005	0.007	0.012
Back pain	333 (2.57)	58 (2.19)	79 (2.59)	0.025	0.002	0.026
Benign breast tumor	126 (0.97)	20 (0.76)	28 (0.92)	0.023	0.005	0.018
Benign prostatic hyperplasia medication	197 (1.52)	43 (1.63)	52 (1.71)	0.009	0.015	0.006
Benign prostatic hypertrophy	278 (2.14)	67 (2.53)	68 (2.23)	0.026	0.006	0.02
Benzodiazepine	921 (7.1)	197 (7.45)	197 (6.47)	0.013	0.025	0.039
Beta-blocker	575 (4.43)	127 (4.8)	143 (4.69)	0.018	0.013	0.005
Bisphosphonates	385 (2.97)	63 (2.38)	57 (1.87)	0.036	0.071	0.035
Breast cancer	172 (1.33)	65 (2.46)	38 (1.25)	0.083	0.007	0.09
Bronchodilator	246 (1.9)	54 (2.04)	64 (2.1)	0.01	0.015	0.004
Calcium	689 (5.31)	146 (5.52)	173 (5.68)	0.009	0.016	0.007
Calcium antagonist	600 (4.63)	126 (4.76)	175 (5.75)	0.007	0.051	0.044
Cancer	357 (2.75)	62 (2.34)	85 (2.79)	0.026	0.002	0.028
Cancer medication	168 (1.3)	46 (1.74)	49 (1.61)	0.036	0.026	0.01

Cataract	260 (2)	49 (1.85)	61 (2)	0.011	0	0.011
Central nervous system diseases	196 (1.51)	52 (1.97)	53 (1.74)	0.035	0.018	0.017
Cerebrovascular disease	190 (1.46)	28 (1.06)	41 (1.35)	0.036	0.01	0.026
Cervicalgia	119 (0.92)	22 (0.83)	37 (1.21)	0.009	0.029	0.038
Cholecystectomy	358 (2.76)	65 (2.46)	76 (2.5)	0.019	0.017	0.002
Chronic obstructive pulmonary disease	229 (1.77)	43 (1.63)	54 (1.77)	0.011	0.001	0.011
Cognitive impairment	74 (0.57)	17 (0.64)	23 (0.76)	0.009	0.023	0.013
Colon cancer	80 (0.62)	18 (0.68)	13 (0.43)	0.008	0.026	0.034
Colon diverticulitis	80 (0.62)	26 (0.98)	21 (0.69)	0.041	0.009	0.032
Colon hemorrhoid	81 (0.62)	12 (0.45)	17 (0.56)	0.023	0.009	0.015
Colon surgery	109 (0.84)	24 (0.91)	30 (0.98)	0.007	0.015	0.008
Column surgery	224 (1.73)	41 (1.55)	68 (2.23)	0.014	0.036	0.05
Connective tissue benign tumor	153 (1.18)	34 (1.29)	45 (1.48)	0.01	0.026	0.016
Constipation	132 (1.02)	27 (1.02)	20 (0.66)	0	0.04	0.04
Contraception	97 (0.75)	20 (0.76)	15 (0.49)	0.001	0.033	0.033
Cystocele	83 (0.64)	18 (0.68)	27 (0.89)	0.005	0.028	0.023
Depression	653 (5.03)	139 (5.26)	151 (4.96)	0.01	0.004	0.014
Diabetes mellitus	1089 (8.4)	238 (9)	275 (9.03)	0.021	0.022	0.001
Digoxin	83 (0.64)	13 (0.49)	9 (0.3)	0.02	0.05	0.031
Disease modifying antirheumatic drugs	61 (0.47)	22 (0.83)	33 (1.08)	0.045	0.07	0.026
Diuretic	1211 (9.34)	245 (9.26)	282 (9.26)	0.003	0.003	0
Dyslipidemia	2769 (21.35)	605 (22.87)	719 (23.6)	0.037	0.054	0.017
Fall	74 (0.57)	25 (0.95)	16 (0.53)	0.043	0.006	0.049
Family history	80 (0.62)	21 (0.79)	20 (0.66)	0.021	0.005	0.016
Feet diseases	255 (1.97)	55 (2.08)	72 (2.36)	0.008	0.027	0.019
Gabapentin	190 (1.46)	48 (1.81)	53 (1.74)	0.028	0.022	0.006
Gastritis	133 (1.03)	27 (1.02)	37 (1.21)	0	0.018	0.018
Glaucoma	149 (1.15)	29 (1.1)	23 (0.76)	0.005	0.041	0.036
Gout	87 (0.67)	15 (0.57)	25 (0.82)	0.013	0.017	0.031
Hand diseases	158 (1.22)	39 (1.47)	31 (1.02)	0.022	0.019	0.041
Helicobacter pylori infection	75 (0.58)	22 (0.83)	22 (0.72)	0.03	0.018	0.012
Hematopoietic cancer	73 (0.56)	22 (0.83)	22 (0.72)	0.032	0.02	0.012
Hiatal hernia	350 (2.7)	71 (2.68)	65 (2.13)	0.001	0.037	0.036
Hip prosthesis	86 (0.66)	22 (0.83)	32 (1.05)	0.02	0.042	0.023
Hyperglycemia	138 (1.06)	30 (1.13)	16 (0.53)	0.007	0.061	0.067
Hypertension	3,376 (26.03)	665 (25.14)	836 (27.45)	0.02	0.032	0.052
Hyperthyroidism	78 (0.6)	16 (0.6)	10 (0.33)	0	0.04	0.041
Hyperuricemia	166 (1.28)	43 (1.63)	32 (1.05)	0.029	0.021	0.05
Hypothyroidism	772 (5.95)	180 (6.81)	209 (6.86)	0.035	0.037	0.002
Hysterectomy surgery	378 (2.91)	66 (2.5)	86 (2.82)	0.026	0.005	0.02
Inhaled corticosteroid	217 (1.67)	48 (1.81)	59 (1.94)	0.011	0.02	0.009
Insomnia	76 (0.59)	11 (0.42)	16 (0.53)	0.024	0.008	0.016
Insulin	246 (1.9)	50 (1.89)	71 (2.33)	0	0.03	0.031
Internal derangement of knee	192 (1.48)	38 (1.44)	47 (1.54)	0.004	0.005	0.009
Iron	106 (0.82)	25 (0.95)	37 (1.21)	0.014	0.04	0.026

Irritable colon syndrome	97 (0.75)	22 (0.83)	12 (0.39)	0.009	0.047	0.056
Ischemic heart disease	375 (2.89)	63 (2.38)	81 (2.66)	0.032	0.014	0.018
Kidney failure	158 (1.22)	38 (1.44)	39 (1.28)	0.019	0.006	0.014
Knee arthrosis	93 (0.72)	21 (0.79)	27 (0.89)	0.009	0.019	0.01
Knee surgery non prosthesis	227 (1.75)	49 (1.85)	56 (1.84)	0.008	0.007	0.001
Knee surgery prosthesis	133 (1.03)	42 (1.59)	43 (1.41)	0.05	0.035	0.014
Lowering uric acid drugs	185 (1.43)	59 (2.23)	51 (1.67)	0.06	0.02	0.04
Macrocytosis	69 (0.53)	20 (0.76)	15 (0.49)	0.028	0.006	0.033
Metamizole	92 (0.71)	28 (1.06)	32 (1.05)	0.037	0.037	0.001
Migraine	189 (1.46)	35 (1.32)	44 (1.44)	0.011	0.001	0.01
Non osteoporotic fracture	209 (1.61)	52 (1.97)	45 (1.48)	0.027	0.011	0.038
NSAIDs	227 (1.75)	38 (1.44)	28 (0.92)	0.025	0.072	0.048
Obesity	484 (3.73)	91 (3.44)	140 (4.6)	0.016	0.043	0.059
Ocular hypertension medication	144 (1.11)	26 (0.98)	29 (0.95)	0.012	0.016	0.003
Oral anticoagulant	399 (3.08)	81 (3.06)	101 (3.32)	0.001	0.014	0.014
Oral antidiabetics	777 (5.99)	194 (7.33)	203 (6.66)	0.054	0.028	0.026
Osteoporosis	412 (3.18)	92 (3.48)	89 (2.92)	0.017	0.015	0.032
Osteoporotic fracture	203 (1.57)	54 (2.04)	49 (1.61)	0.036	0.003	0.032
Other antihypertensives	379 (2.92)	92 (3.48)	86 (2.82)	0.032	0.006	0.037
Other arrhythmias	448 (3.45)	86 (3.25)	110 (3.61)	0.011	0.009	0.02
Other articular surgeries	374 (2.88)	77 (2.91)	104 (3.41)	0.002	0.03	0.029
Other benign tumors	138 (1.06)	30 (1.13)	41 (1.35)	0.007	0.026	0.019
Other biliary diseases	425 (3.28)	75 (2.84)	91 (2.99)	0.026	0.017	0.009
Other colon diseases	165 (1.27)	27 (1.02)	46 (1.51)	0.024	0.02	0.044
Other dermatological diseases	188 (1.45)	35 (1.32)	51 (1.67)	0.011	0.018	0.029
Other digestive diseases	336 (2.59)	63 (2.38)	91 (2.99)	0.013	0.024	0.037
Other ear diseases	160 (1.23)	33 (1.25)	35 (1.15)	0.001	0.008	0.009
Other endocrine diseases	190 (1.46)	40 (1.51)	51 (1.67)	0.004	0.017	0.013
Other esophagus diseases	284 (2.19)	65 (2.46)	71 (2.33)	0.018	0.01	0.008
Other eyes diseases	166 (1.28)	50 (1.89)	40 (1.31)	0.049	0.003	0.046
Other heart diseases	93 (0.72)	17 (0.64)	19 (0.62)	0.009	0.011	0.002
Other hematologic diseases	216 (1.67)	45 (1.7)	44 (1.44)	0.003	0.018	0.021
Other hip diseases	83 (0.64)	14 (0.53)	17 (0.56)	0.015	0.011	0.004
Other infection	245 (1.89)	64 (2.42)	49 (1.61)	0.037	0.021	0.058
Other knee disease	80 (0.62)	13 (0.49)	16 (0.53)	0.017	0.012	0.005
Other liver disease	164 (1.26)	30 (1.13)	36 (1.18)	0.012	0.008	0.004
Other musculoskeletal infection	231 (1.78)	71 (2.68)	62 (2.04)	0.061	0.019	0.043
Other neurological diseases	86 (0.66)	22 (0.83)	19 (0.62)	0.02	0.005	0.024
Other otorhinolaryngology diseases	219 (1.69)	46 (1.74)	53 (1.74)	0.004	0.004	0
Other ovary diseases	126 (0.97)	28 (1.06)	24 (0.79)	0.009	0.02	0.028
Other psychiatric conditions	118 (0.91)	26 (0.98)	19 (0.62)	0.008	0.033	0.04

Other respiratory diseases	81 (0.62)	24 (0.91)	12 (0.39)	0.032	0.032	0.064
Other spine diseases	157 (1.21)	26 (0.98)	35 (1.15)	0.022	0.006	0.016
Other urological diseases	79 (0.61)	16 (0.6)	26 (0.85)	0.001	0.029	0.029
Other uterus diseases	327 (2.52)	59 (2.23)	75 (2.46)	0.019	0.004	0.015
Other valve diseases	146 (1.13)	32 (1.21)	35 (1.15)	0.008	0.002	0.006
Other virus infection	291 (2.24)	65 (2.46)	62 (2.04)	0.014	0.014	0.028
Paracetamol	320 (2.47)	67 (2.53)	99 (3.25)	0.004	0.047	0.043
Parkinson's disease	72 (0.56)	11 (0.42)	19 (0.62)	0.02	0.009	0.029
Peptic ulcer	204 (1.57)	39 (1.47)	27 (0.89)	0.008	0.062	0.054
Peripheral artery disease	83 (0.64)	21 (0.79)	30 (0.98)	0.018	0.038	0.02
Peripheral nervous system diseases	289 (2.23)	65 (2.46)	84 (2.76)	0.015	0.034	0.019
Pregnancy	246 (1.9)	44 (1.66)	57 (1.87)	0.018	0.002	0.016
Prostate cancer	79 (0.61)	17 (0.64)	21 (0.69)	0.004	0.01	0.006
Proton-pump inhibitor medication	1,087 (8.38)	241 (9.11)	270 (8.86)	0.026	0.017	0.009
Psoriasis	138 (1.06)	33 (1.25)	55 (1.81)	0.017	0.062	0.046
Pulmonary embolism or deep vein thrombosis	90 (0.69)	21 (0.79)	23 (0.76)	0.012	0.007	0.004
Salpingectomy and oophorectomy	211 (1.63)	42 (1.59)	30 (0.98)	0.003	0.057	0.054
Second and third analgesia level	236 (1.82)	55 (2.08)	77 (2.53)	0.019	0.049	0.03
Shoulder diseases	112 (0.86)	21 (0.79)	43 (1.41)	0.008	0.052	0.059
Sleep apnea	68 (0.52)	13 (0.49)	25 (0.82)	0.005	0.036	0.041
Smoking habit	413 (3.18)	96 (3.63)	128 (4.2)	0.025	0.054	0.03
Statins	2,259 (17.42)	501 (18.94)	595 (19.53)	0.04	0.055	0.015
Stomach bowel disease	70 (0.54)	24 (0.91)	13 (0.43)	0.043	0.016	0.059
Symptomatic slow action drugs for osteoarthritis	173 (1.33)	21 (0.79)	21 (0.69)	0.053	0.064	0.012
Thyroid hormone	802 (6.18)	188 (7.11)	199 (6.53)	0.037	0.014	0.023
Thyroid nodule	88 (0.68)	12 (0.45)	9 (0.3)	0.03	0.055	0.026
Thyroid others	118 (0.91)	21 (0.79)	20 (0.66)	0.013	0.029	0.016
Thyroidectomy	158 (1.22)	30 (1.13)	27 (0.89)	0.008	0.033	0.025
Tonsillectomy	178 (1.37)	37 (1.4)	29 (0.95)	0.002	0.039	0.041
Tuberculosis infection	84 (0.65)	13 (0.49)	11 (0.36)	0.021	0.04	0.02
Unspecified arthrosis	114 (0.88)	17 (0.64)	22 (0.72)	0.027	0.018	0.01
Urological obstruction	161 (1.24)	36 (1.36)	40 (1.31)	0.011	0.006	0.004
Urological surgery	124 (0.96)	39 (1.47)	34 (1.12)	0.047	0.016	0.032
Venous insufficiency peripheral	334 (2.57)	43 (1.63)	56 (1.84)	0.066	0.05	0.016
Viral hepatitis	183 (1.41)	30 (1.13)	31 (1.02)	0.025	0.036	0.011
Vitamins	88 (0.68)	28 (1.06)	31 (1.02)	0.041	0.037	0.004
Outpatient readmission	1,983 (15.29)	254 (9.6)	291 (9.55)	0.173	0.175	0.002
Sex, women	9,198 (70.91)	1,858 (70.25)	2,098 (68.88)	0.015	0.044	0.03
Age at first visit in clinic	56.3 (44.3-70.4)	55.7 (44.3-69.4)	55 (44.9-69.6)	0.032	0.02	0.012
Age at discharge	56.7 (44.8-70.7)	56.4 (45.2-70.4)	56.1 (45.4–70.6)	0.011	0.007	0.018
Number of previous discharges	1 (1–1)	1 (1-1)	1 (1-1)	0.006	0.041	0.037

Number of diagnoses at discharge	1 (1 –1)	1 (1–1)	1 (1–1)	0.005	0.001	0.004
Number of treatments at discharge	1 (0–2)	1 (0–2)	1 (0–2)	0.072	0.137	0.065
Number of visits until discharge, since first visit in clinic	1 (1–2)	1 (1–3)	1 (1–3)	0.155	0.142	0.022
Number of visits until discharge, since last discharge	1 (1–1)	1 (1-2)	1 (1-2)	0.183	0.158	0.038
Follow-up days until discharge, per discharge episode	0 (0–0)	0 (0–47)	0 (0–42)	0.182	0.187	0.012
Follow-up days until discharge, since last discharge	0 (0–0)	0 (0–0)	0 (0–0)	0.197	0.243	0.055
Follow-up days until discharge, since first visit in clinic	0 (0–47)	0 (0–147)	0 (0–160)	0.285	0.329	0.057
Follow-up days until discharge, since previous visit in clinic	0 (0-32)	0 (0–56)	0 (0-62)	0.234	0.252	0.031
Rosser index at first visit in clinic	98.6 (98.6–99.5)	98.6 (98.6–99.5)	98.6 (97.3–99.5)	0.028	0.004	0.037
Rosser index at discharge	98.6 (98.6–99.5)	98.6 (98.6–99.5)	98.6 (98.6–99.5)	0.013	0.014	0.001
Rosser index at first episode visit	98.6 (98.6–99.5)	98.6 (97.3–99.5)	98.6 (97.3–99.5)	0.042	0.021	0.028
Occupation at first visit in clinic	-	-	-	0.1	0.143	0.045
Active	7,142 (55.06)	1,551 (58.64)	1,833 (60.18)			
Housework	3,078 (23.73)	604 (22.84)	695 (22.82)			
Retired	2,468 (19.03)	417 (15.77)	433 (14.22)			
Student	283 (2.18)	73 (2.76)	85 (2.79)			
Occupation at discharge	-	-	-	0.115	0.129	0.028
Active	7,115 (54.85)	1,537 (58.11)	1,809 (59.39)			
Housework	3,103 (23.92)	648 (24.50)	714 (23.44)			
Retired	2,469 (19.03)	392 (14.82)	443 (14.54)			
Student	284 (2.19)	68 (2.57)	80 (2.63)			
Occupation at first episode visit	0.112	0.132	0.031	0.112	0.132	0.031
Active	7,124 (54.92)	1,540 (58.22)	1,818 (59.68)			
Housework	3,098 (23.88)	637 (24.08)	701 (23.01)			
Retired	2,467 (19.02)	397 (15.01)	444 (14.58)			
Student	282 (2.17)	71 (2.68)	83 (2.72)			
Distress Subscale at first visit in clinic	0.093	0.088	0.013	0.093	0.088	0.013
None	2,390 (18.43)	429 (16.22)	497 (16.32)			
Low	8,574 (66.10)	1,725 (65.22)	1,993 (65.43)			
Moderate	1,922 (14.82)	473 (17.88)	538 (17.66)			
High	85 (0.66)	18 (0.68)	18 (0.59)			

Distress Subscale at discharge	0.055	0.054	0.046	0.055	0.054	0.046
None	2,883 (22.23)	537 (20.30)	661 (21.70)			
Low	8,413 (64.86)	1,746 (66.01)	1,944 (63.82)			
Moderate	1,597 (12.31)	350 (13.23)	427 (14.02)			
High	78 (0.60)	12 (0.45)	14 (0.46)			
Distress at first episode visit	0.123	0.132	0.026	0.123	0.132	0.026
None	2,428 (18.72)	407 (15.39)	476 (15.63)			
Low	8,552 (65.93)	1,732 (65.48)	1,975 (64.84)			
Moderate	1,907 (14.70)	489 (18.49)	580 (19.04)			
High	84 (0.65)	17 (0.64)	15 (0.49)			
Disability Subscale at first visit in clinic	0.059	0.08	0.078	0.059	0.08	0.078
None	5,379 (41.47)	1,077 (40.72)	1,171 (38.44)			
Slight social	5,243 (40.42)	1,081 (40.87)	1,268 (41.63)			
Severe social and slight physical	1,402 (10.81)	279 (10.55)	365 (11.98)			
Moderate decrease in mobility	570 (4.39)	141 (5.33)	160 (5.25)			
Severe decrease in mobility	286 (2.20)	46 (1.74)	65 (2.13)			
Almost dependent	86 (0.66)	19 (0.72)	17 (0.56)			
In bed	5 (0.04)	2 (0.08)	0			
Disability Subscale at discharge	0.04	0.067	0.081	0.04	0.067	0.081
None	6,038 (46.55)	1,231 (46.54)	1,356 (44.52)			
Slight social	4,940 (38.08)	1,032 (39.02)	1,185 (38.90)			
Severe social and slight physical	1,248 (9.62)	227 (8.58)	300 (9.85)			
Moderate decrease in mobility	437 (3.37)	87 (3.29)	132 (4.33)			
Severe decrease in mobility	229 (1.77)	50 (1.89)	51 (1.67)			
Almost dependent	75 (0.58)	17 (0.64)	22 (0.72)			
In bed	4 (0.03)	1 (0.04)	0			
Disability Subscale at first episode visit	0.067	0.116	0.079	0.067	0.116	0.079
None	5,442 (41.96)	1,051 (39.74)	1,138 (37.36)			
Slight social	5,232 (40.34)	1,088 (41.13)	1,262 (41.43)			
Severe social and slight physical	1,403 (10.82)	295 (11.15)	394 (12.93)			
Moderate decrease in mobility	532 (4.10)	136 (5.14)	162 (5.32)			
Severe decrease in mobility	273 (2.10)	52 (1.97)	69 (2.27)			
Almost dependent	84 (0.65)	21 (0.79)	21 (0.69)			
In bed	5 (0.04)	2 (0.08)	0			
(90) Median Rosser (w)	98.6 (98.6-99.5)	98.6 (98.6-99.5)	98.6 (97.3-99.5)	0.036	0.023	0.016

(90) Median Rosser (c)	98.6 (98.6-99.5)	98.6 (98.6-99.5)	98.6 (98.4-99.5)	0.023	0.019	0.006
(90) Mean Rosser (w)	98.6 (98.6-99.5)	98.6 (98.6-99.5)	98.6 (97.3-99.5)	0.037	0.024	0.016
(90) Mean Rosser (c)	98.6 (98.6-99.5)	98.6 (98.6-99.5)	98.6 (98.1-99.5)	0.027	0.022	0.008
(182) Median Rosser (w)	98.6 (98.6-99.5)	98.6 (98.6-99.5)	98.6 (97.3-99.5)	0.035	0.025	0.014
(182) Median Rosser (c)	98.6 (98.6-99.5)	98.6 (98.6-99.5)	98.6 (98.0-99.5)	0.023	0.021	0.005
(182) Mean Rosser (w)	98.6 (98.6-99.5)	98.6 (98.35-99.5)	98.6 (97.3-99.5)	0.036	0.026	0.014
(182) Mean Rosser (c)	98.6 (98.6-99.5)	98.6 (98.35-99.5)	98.6 (97.9-99.5)	0.026	0.022	0.007
(90) Median Disability (w)	2 (1-2)	2 (1-2)	2 (1-2)	0.035	0.08	0.044
(90) Median Disability (c)	2 (1-2)	2 (1-2)	2 (1-2)	0.018	0.066	0.047
(90) Mean Disability (w)	2 (1-2)	2 (1-2)	2 (1-2)	0.037	0.08	0.042
(90) Mean Disability (c)	2 (1-2)	2 (1-2)	2 (1-2)	0.018	0.068	0.049
(182) Median Disability (w)	2 (1-2)	2 (1-2)	2 (1-2)	0.043	0.089	0.045
(182) Median Disability (c)	2 (1-2)	2 (1-2)	2 (1-2)	0.022	0.073	0.052
(182) Mean Disability (w)	2 (1-2)	2 (1-2)	2 (1-2)	0.045	0.087	0.042
(182) Mean Disability (c)	2 (1-2)	2 (1-2)	2 (1-2)	0.024	0.073	0.049
(90) Median Distress (w)	1 (1 - 1)	1 (1 - 1)	1 (1 - 1)	0.093	0.085	0.007
(90) Median Distress (c)	1 (1 - 1)	1 (1 - 1)	1 (1 - 1)	0.072	0.064	0.008
(90) Mean Distress (w)	1 (1 - 1)	1 (1 - 1)	1 (1 - 1)	0.093	0.086	0.007
(90) Mean Distress (c)	1 (1 - 1)	1 (1 - 1)	1 (1 - 1)	0.073	0.064	0.008
(182) Median Distress (w)	1 (1 - 1)	1 (1 - 1)	1 (1 - 1)	0.097	0.097	0.001
(182) Median Distress (c)	1 (1 - 1)	1 (1 - 1)	1 (1 - 1)	0.075	0.07	0.004
(182) Mean Distress (w)	1 (1 - 1)	1 (1 - 1)	1 (1 - 1)	0.099	0.098	0.001
(182) Mean Distress (c)	1 (1 - 1)	1 (1 - 1)	1 (1 - 1)	0.078	0.073	0.004

TR: Train dataset; VL: Validation dataset; TS: Test dataset; (90): Mean/median value of all the observations registered in the last 90 day before discharge; (182): Same, but for 182 days; (c): Mean/median value considering the discharge observation; (w): Same, but without considering discharge observation

Supplementary Table 6.12: Performance measures of the 10 selected outpatient readmission prediction models, and of the reduced final model, based on Precision-Recall, Positive Predictive Value and Negative Predictive Value

Model	Precision - Recall				Positive Predictive Value				Negative Predictive Value			
	TR	V	CV	TS	TR	V	CV	TS	TR	V	CV	TS
1	0.452	0.165	0.403	0.177	0.327	0.166	0.301	0.161	0.909	0.931	0.910	0.928
2	0.451	0.175	0.408	0.186	0.325	0.176	0.306	0.168	0.905	0.931	0.910	0.927
3	0.457	0.171	0.409	0.181	0.335	0.171	0.306	0.170	0.909	0.932	0.912	0.931
4	0.459	0.168	0.406	0.180	0.332	0.175	0.305	0.162	0.909	0.933	0.911	0.929
5	0.457	0.170	0.409	0.179	0.335	0.175	0.304	0.166	0.909	0.932	0.912	0.930
6	0.449	0.183	0.398	0.177	0.331	0.186	0.310	0.174	0.904	0.933	0.911	0.930
7	0.450	0.183	0.402	0.178	0.336	0.178	0.307	0.173	0.906	0.931	0.908	0.928
8	0.455	0.177	0.412	0.180	0.334	0.180	0.308	0.167	0.905	0.932	0.909	0.926
9	0.455	0.177	0.412	0.179	0.334	0.178	0.308	0.168	0.905	0.932	0.909	0.927
10	0.455	0.177	0.412	0.180	0.332	0.178	0.307	0.170	0.906	0.932	0.910	0.927
Reduced final model	-	-	0.387	0.170	-	-	0.304	0.165	-	-	0.907	0.924

TR: Results from the Train dataset; CV: Cross-validated results from the Train and Validation datasets; V: Validation dataset; TS: Test dataset