



Supplementary Figure 1. Study design. cDMARD: conventional disease-modifying antirheumatic drug, RA: rheumatoid arthritis.

Supplementary Table 1. HIRA codes for radiography and blood tests used

Classification	Description	HIRA code
CRP	Qualitative	C2241
	Semiquantitative	C2242
	Quantitative	C2243
ESR	Visual method (Westergren, Wintrobe Tube, etc.)	B1033
	Infrared ray or spin method	B1034
X-ray	Chest X-ray×1 time~5 times or more	G2101 - G2105
	Hand X-ray×1 time~5 times or more	G6501 - G6505
	Finger X-ray×1 time~5 times or more	G8101 - G8105
	Carpal bone X-ray×1 time~5 times or more	G6601 - G6605
	Wrist X-ray×1 time~5 times or more	G6401 - G6405
	Ankle X-ray×1 time~5 times or more	G7401 - G7405
	Foot X-ray x 1 time~5 times or more	G7501 - G7505
	Tarsal bone X-ray×1 time~5 times or more	G7801 - G7805
	Calcaneus X-ray×1 time -5 times or more	G7901 - G7905
	Toe X-ray x 1 time -5 times or more	G8201 - G8205
	Hip joint X-ray×1 time~5 times or more	G5201 - G5205
	Knee Joint X-ray×1 time~5 times or more	G7201 - G7205
	Patella X-ray×1 time~5 times or more	G7701 - G7705
	Temporomandibular Joint X-ray×1 time~5 times or more	G1601 - G1605
	Temporomandibular Joint X-ray Standard shoot	G9901
	Mandible X-ray×1 time~5 times or more	G1401 - G1405
	Shoulder X-ray×1 time~5 times or more	G3301 - G3305
	Elbow X-ray×1 time~5 times or more	G6201 - G6205
	Cervical Spine X-ray×1 time~5 times or more	G4101 - G4105
	Cervicothoracic Spine X-ray×1 time~5 times or more	G4201 - G4205
	Thoracic Spine X-ray×1 time~5 times or more	G4301 - G4305
	Thoracolumbar Spine X-ray×1 time~5 times or more	G4401 - G4405
	Lumber Spine X-ray×1 time~5 times or more	G4501- G4505
Lumbosacral Spine X-ray×1 time~5 times or more	G4601 - G4605	
Sacral Spine and Coccyx X-ray×1 time~5 times or more	G4701 - G4705	
Entire Spine X-ray×1 time~5 times or more	G4901 - G4905	
MRI	Shoulder Joint MRI	
	General	HE115
	Imaging before and after contrast injection	HE215
	Interventional procedure induction from the second	HE315
	Limited (Radiation therapy range and positioning etc.)	HE415
	3Dimension	HE515
	Elbow Joint MRI	
	General	HE116
	Imaging before and after contrast injection	HE216
	Interventional procedure induction from the second	HE316
	Limited (Radiation therapy range and positioning etc.)	HE416
	3Dimension	HE516

Supplementary Table 1. Continued 1

Classification	Description	HIRA code
	Wrist Joint MRI	
	General	HE117
	Imaging before and after contrast injection	HE217
	Interventional procedure induction from the second	HE317
	Limited (Radiation therapy range and positioning etc.)	HE417
	3Dimension	HE517
	TM Joint MRI	
	General	HE107
	Imaging before and after contrast injection	HE207
	Interventional procedure induction from the second	HE307
	Limited (Radiation therapy range and positioning etc.)	HE407
	3Dimension	HE507
	Hip Joint MRI	
	General	HE118
	Imaging before and after contrast injection	HE218
	Interventional procedure induction from the second	HE318
	Limited (Radiation therapy range and positioning etc.)	HE418
	3Dimension	HE518
	Knee Joint MRI	
	General	HE120
	Imaging before and after contrast injection	HE220
	Interventional procedure induction from the second	HE320
	Limited (Radiation therapy range and positioning etc.)	HE420
	3Dimension	HE520
	Ankle Joint MRI	
	General	HE121
	Imaging before and after contrast injection	HE221
	Interventional procedure induction from the second	HE321
	Limited (Radiation therapy range and positioning etc.)	HE421
	3Dimension	HE521
	Cervical Spine MRI	
	General	HE109
	Imaging before and after contrast injection	HE209
	Interventional procedure induction from the second	HE309
	Limited (Radiation therapy range and positioning etc.)	HE409
	3Dimension	HE509
	Spine, Spinal cavity, cervical spine, thoracic spine and lumbar spine	
	3D	HE514
	General	HE114
	Imaging before and after contrast injection	HE214
	Interventional procedure induction from the second	HE314
	Arthrography	
	Basic MRI -musculoskeletal system- arthrography	HE142

Supplementary Table 1. Continued 2

Classification	Description	HIRA code
	Thoracic spine MRI	
	General	HE110
	Imaging before and after contrast injection	HE210
	Interventional procedure induction from the second	HE310
	Limited (Radiation therapy range and positioning etc.)	HE410
	3Dimension	HE510
	Lumbosacral spine MRI	
	General	HE111
	Imaging before and after contrast injection	HE211
	Interventional procedure induction from the second	HE311
	Limited (Radiation therapy range and positioning etc.)	HE411
	3Dimension	HE511
Ultrasound	Neck Ultrasound	E9416 (2014)
	One Point Ultrasonography	EB401
	Simple Ultrasonography	EB402
	Neck Ultrasonography-Neck Except Thyroid-Parathyroid gland	EB415
	Multiple arthritis due to rheumatoid disease	EB469
	Extremity Joint Ultrasound-Shoulder, Hip, Knee, Elbow, Wrist, Ankle	E9451 (2014)
	Extremity Joint Ultrasound-Hand, Foot	E9452 (2014)
	Finger	EB461
	Toe	EB462
	Elbow	EB463
	Knee	EB464
	Hip	EB465
	Shoulder	EB466
	Wrist	EB467
	Ankle	EB468

HIRA: Korean Health Insurance Review and Assessment, CRP: C-reactive protein, ESR: erythrocyte sedimentation rate, MRI: magnetic resonance imaging, TM: temporomandibular.