

**Supplemental Table 1:  
Patient Characteristics and Results**

Patient no.	Sex	Age (y)	Clinical indication for performing SPECT HR FP-CT/ final patient diagnosis	Diagnostic confidence SPECT/HR FP-CT: reader 1/reader 2	Diagnostic confidence SPECT/LR-CT: reader 1/reader 2	Agreement SPECT/HR FP-CT with final patient diagnosis: reader 1/reader 2	Agreement SPECT/LR- CT with final patient diagnosis: reader 1/reader 2
1	F	57	Suspected osteomyelitis/ transient osteoporosis of lower leg/foot associated with lymphedema	2/2	3/2	No/No	No/No
2	F	55	Suspected osteomyelitis/ complex regional pain syndrome associated with lymphedema	2/2	3/2	No/No	No/No
3	M	28	Suspected osteomyelitis/ chronic osteomyelitis of calcaneus	1/1	1/1	Yes/Yes	Yes/Yes
4	M	56	Suspected osteomyelitis/ chronic osteomyelitis of distal femur	1/1	1/2	Yes/Yes	Yes/Yes
5	F	45	Suspected osteomyelitis/ chronic osteomyelitis of calcaneus with adjacent active soft-tissue calcifications	1/1	1/2	Yes/Yes	Yes/No
6	M	73	Suspected osteomyelitis/ Charcot foot with chronic osteomyelitis of talus	1/1	2/2	Yes/Yes	Yes/Yes
7	M	41	Suspected osteomyelitis/ Brodie abscess of distal femur	1/2	2/2	Yes/Yes	Yes/Yes
8	W	73	Suspected osteomyelitis/ wound infection after osteosynthetic reconstruction of a tibial fracture with no signs of osteomyelitis	1/1	2/2	Yes/Yes	No/Yes
9	F	47	Suspected osteomyelitis/ nonfusion of calcaneal fracture after osteosynthetic treatment with no signs of osteomyelitis and degenerative disease of adjacent joints	1/1	2/2	Yes/Yes	No/No
10	M	59	Suspected osteomyelitis/ Charcot foot with chronic osteomyelitis of osseous fragments of the hindfoot	1/2	2/2	Yes/Yes	Yes/Yes
11	M	45	Suspected osteomyelitis/ infarct of calcaneus with no signs of osteomyelitis	1/1	2/2	Yes/No	No/No

12	F	71	Suspected osteomyelitis/ stress fracture of second metatarsal bone	1/1	2/2	Yes/Yes	No/Yes
13	M	61	Suspected osteomyelitis/ Charcot foot with degenerative changes and no signs of osteomyelitis	1/1	3/2	Yes/Yes	No/Yes
14	F	40	Suspected degenerative joint disease/ status post displacement of the tibial tuberositas with degenerative disease of femoropatellar joint	1/1	2/2	Yes/Yes	Yes/Yes
15	F	40	Suspected degenerative joint disease/ status post displacement of the tibial tuberositas with degenerative disease of femoropatellar joint	1/1	2/2	Yes/Yes	Yes/Yes
16	F	57	Suspected degenerative joint disease/ history of rheumatoid arthritis and postarthritic degenerative disease of STT joint	1/1	2/2	Yes/Yes	No/No
17	F	62	Suspected degenerative joint disease/ history of rheumatoid arthritis and postarthritic degenerative disease of upper ankle joint	1/1	2/2	Yes/Yes	No/No
18	M	62	Suspected degenerative joint disease/ posttraumatic degenerative disease of upper ankle joint and tarsometatarsal joints	1/1	2/2	Yes/Yes	Yes/Yes
19	M	69	Suspected degenerative joint disease/ severe arthritic changes in a clubfoot with no signs of osteomyelitis	1/1	2/2	Yes/Yes	Yes/Yes
20	M	33	Suspected degenerative joint disease/ arthrosis of the upper ankle joint with ventral impingement	1/1	2/2	Yes/Yes	No/No
21	M	32	Suspected degenerative joint disease/ arthrosis of the upper ankle joint with dorsal impingement	1/1	2/2	Yes/Yes	No/No
22	F	73	Suspected degenerative joint disease/ arthrosis of the knee with no signs of synovitis or osteomyelitis	1/1	2/2	Yes/Yes	Yes/Yes
23	M	30	Suspected degenerative joint disease/ osteochondrosis dissecans with secondary degenerative disease of upper ankle joint	1/1	3/2	Yes/Yes	No/No
24	M	23	Suspected degenerative joint disease/ osteochondrosis dissecans with secondary degenerative disease of upper ankle joint	1/1	2/2	Yes/Yes	Yes/Yes
25	M	22	Suspected degenerative joint disease/ osteochondrosis dissecans	1/2	2/2	Yes/Yes	Yes/Yes

26	F	50	Suspected degenerative joint disease/ osteochondrosis dissecans and fusion of calcaneocuboidal joint arthrodesis	1/1	2/2	Yes/Yes	No/Yes
27	F	16	Suspected degenerative joint disease/ osteochondrosis dissecans	1/1	1/3	Yes/Yes	Yes/No
28	F	65	Evaluation of arthroplasty and arthrodesis/ loosening of knee prosthesis	1/1	2/2	Yes/Yes	Yes/Yes
29	M	58	Evaluation of arthroplasty and arthrodesis/ loosening of knee prosthesis	1/2	1/1	Yes/ Yes	Yes/Yes
30	F	70	Evaluation of arthroplasty and arthrodesis/ arthrosis of the femoropatellar joint with no sign of knee prosthesis loosening	1/1	2/2	Yes/Yes	Yes/ Yes
31	M	37	Evaluation of arthroplasty and arthrodesis/ arthrosis of the tibiotalar and tibiofibular joint with no sign of upper ankle prosthesis loosening	2/2	2/2	Yes/Yes	Yes/Yes
32	F	47	Evaluation of arthroplasty and arthrodesis/ arthrosis of the tibiotalar and fibulotalar joint with no sign of upper ankle prosthesis loosening	1/1	2/2	Yes/No	Yes/No
33	F	55	Evaluation of arthroplasty and arthrodesis/ no signs of loosening of knee sled-prosthesis	1/2	2/2	Yes/ Yes	Yes/Yes
34	M	52	Evaluation of arthroplasty and arthrodesis/ arthrosis of the femoropatellar joint with no sign of knee prosthesis loosening	1/1	2/2	Yes/Yes	Yes/Yes
35	M	53	Evaluation of arthroplasty and arthrodesis/ arthrosis of the fibulotalar joint with no sign of upper ankle prosthesis loosening	1/2	2/2	Yes/ Yes	Yes/Yes
36	F	50	Evaluation of arthroplasty and arthrodesis/ No loosening of knee sled prosthesis with stress-induced changes of the medial tibial plateau	1/1	2/2	Yes/Yes	Yes/No
37	F	67	Evaluation of arthroplasty and arthrodesis/ nonfusion of talonavicular joint arthrodesis	1/1	1/2	Yes/Yes	No/No
38	F	52	Evaluation of arthroplasty and arthrodesis/ fusion of talonavicular joint arthrodesis with degenerative disease of adjacent joints	1/2	2/2	Yes/ Yes	Yes/Yes
39	F	63	Evaluation of arthroplasty and arthrodesis/ nonfusion of calcaneocuboidal joint arthrodesis	2/2	2/2	Yes/Yes	No/No

40	F	51	Evaluation of arthroplasty and arthrodesis/ nonfusion of upper ankle joint arthrodesis with osteomyelitis of the talus	1/1	3/2	Yes/Yes	No/No
41	F	53	Evaluation of arthroplasty and arthrodesis/ nonfusion of upper and lower ankle joint arthrodesis with degenerative disease of adjacent joints	1/1	2/2	Yes/Yes	No/Yes

**3-point diagnostic confidence scale for image interpretation: Score 1, SPECT/CT allows a definitive diagnosis that answers the clinical question. Score 2, there is an abnormality on the SPECT/CT study probably explaining patient's symptoms, but it is not possible to make a definitive diagnosis. Follow-up or additional examinations are recommended for further evaluation. Score 3, no relevant abnormality explaining patient's symptoms can be detected on the SPECT/CT images.**

**SPECT/HR FP-CT images = SPECT/high-resolution flat-panel CT images; SPECT/LR-CT images = SPECT/low-resolution CT images.**

**Supplemental Table 2  
Added Value of High-Resolution Flat-Panel and Low-Resolution CT Images  
in the Interpretation of SPECT/CT**

Areas of examination	High-resolution flat-panel CT images	Low-resolution CT images
Degenerative joint disease/ Osteochondritis dissecans (14 patients)	- Improved localization of regions of increased tracer uptake - Detailed morphologic information regarding the degree of osteophytes, subchondral sclerosis, superimposed arthritic bony erosions, separation of the osteochondral fragment, and extent of involvement of the subchondral bone plate	Localization of regions of increased tracer uptake
Osteomyelitis (13 patients)	- Improved localization of regions of increased tracer uptake - Detailed morphologic information in areas of complex anatomy regarding alterations such as osteolysis, sclerosis, sequestra and intraosseous fistulas	Localization of regions of increased tracer uptake
Arthroplasty/arthrodesis (14 patients)	- Improved localization of regions of increased tracer uptake - Reduced metallic and beam-hardening artifacts, making it feasible to localize linear lucent areas adjacent to arthroplasties indicating loosening and to image minute bridging trabeculation across the area of arthrodesis	Localization of regions of increased tracer uptake