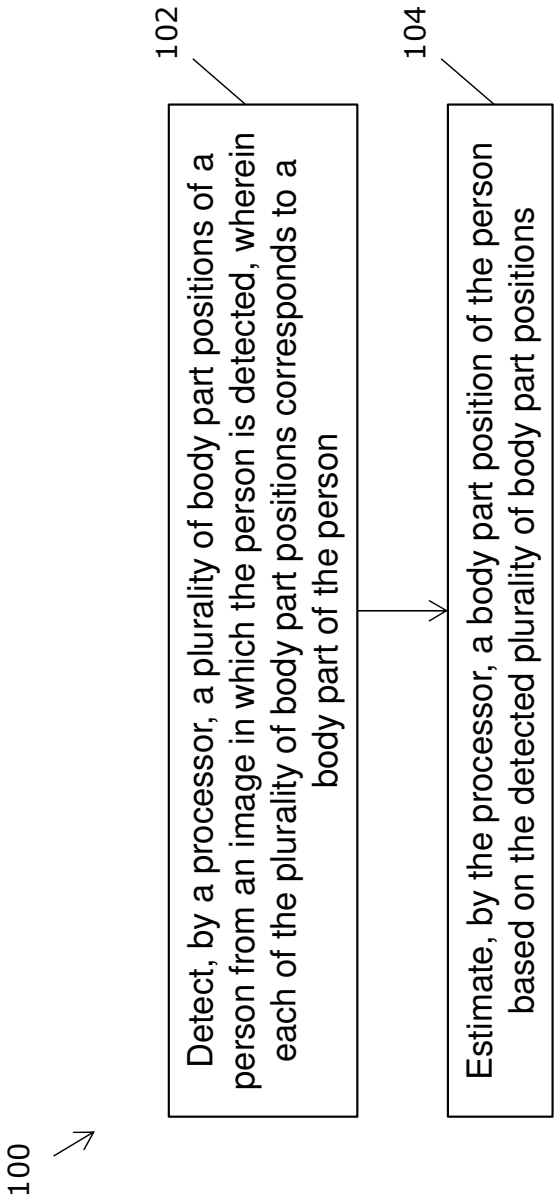

100
102
Detect, by a processor, a plurality of body part positions of a person from an image in which the person is detected, wherein each of the plurality of body part positions corresponds to a body part of the person
104
Estimate, by the processor, a body part position of the person based on the detected plurality of body part positions

Figure 1

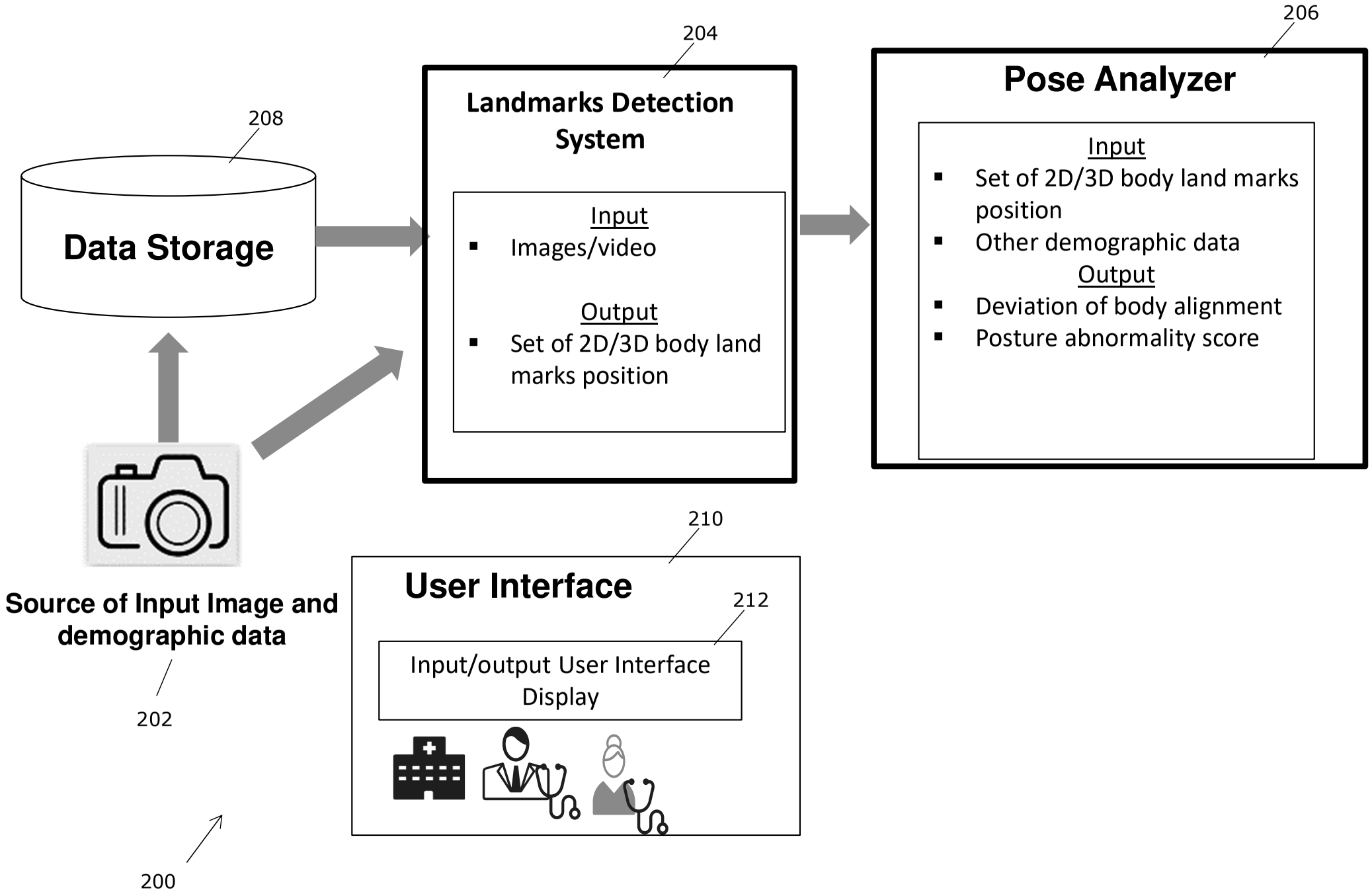

206
204
Landmarks Detection System
Pose Analyzer
208
Data Storage
Input
Images/video
Output
Set of 2D/3D body land marks position
Input
Set of 2D/3D body land marks position
Other demographic data
Output
Deviation of body alignment
Posture abnormality score
210
User Interface
212
Input/output User Interface Display
Source of Input Image and demographic data
202
200

Figure 2

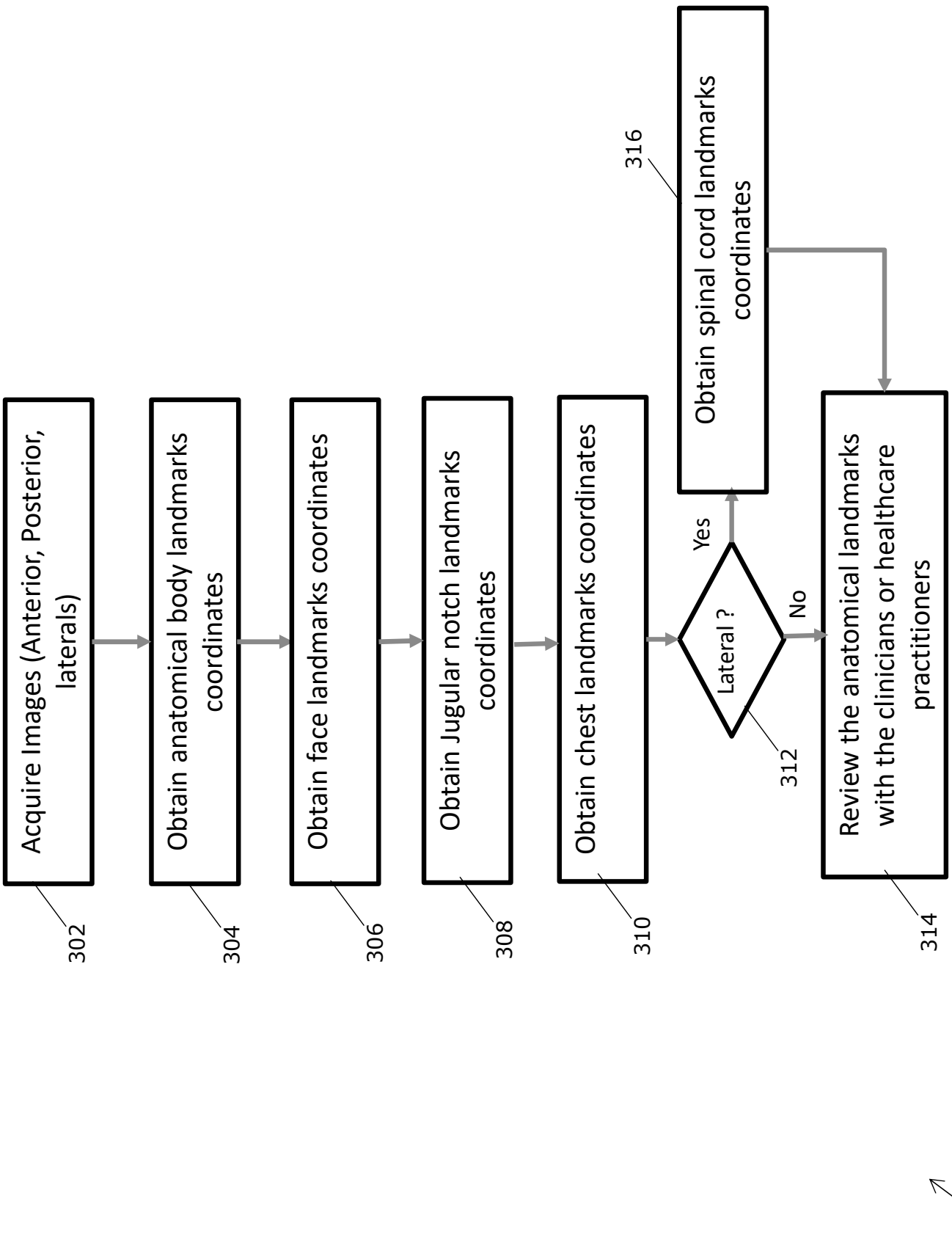

Acquire Images (Anterior, Posterior, laterals)
Obtain anatomical body landmarks coordinates
Obtain face landmarks coordinates
Obtain Jugular notch landmarks coordinates
Obtain chest landmarks coordinates
Lateral ?
Yes
No
Obtain spinal cord landmarks coordinates
Review the anatomical landmarks with the clinicians or healthcare practitioners
302
304
306
308
310
312
314
316
300

Figure 3

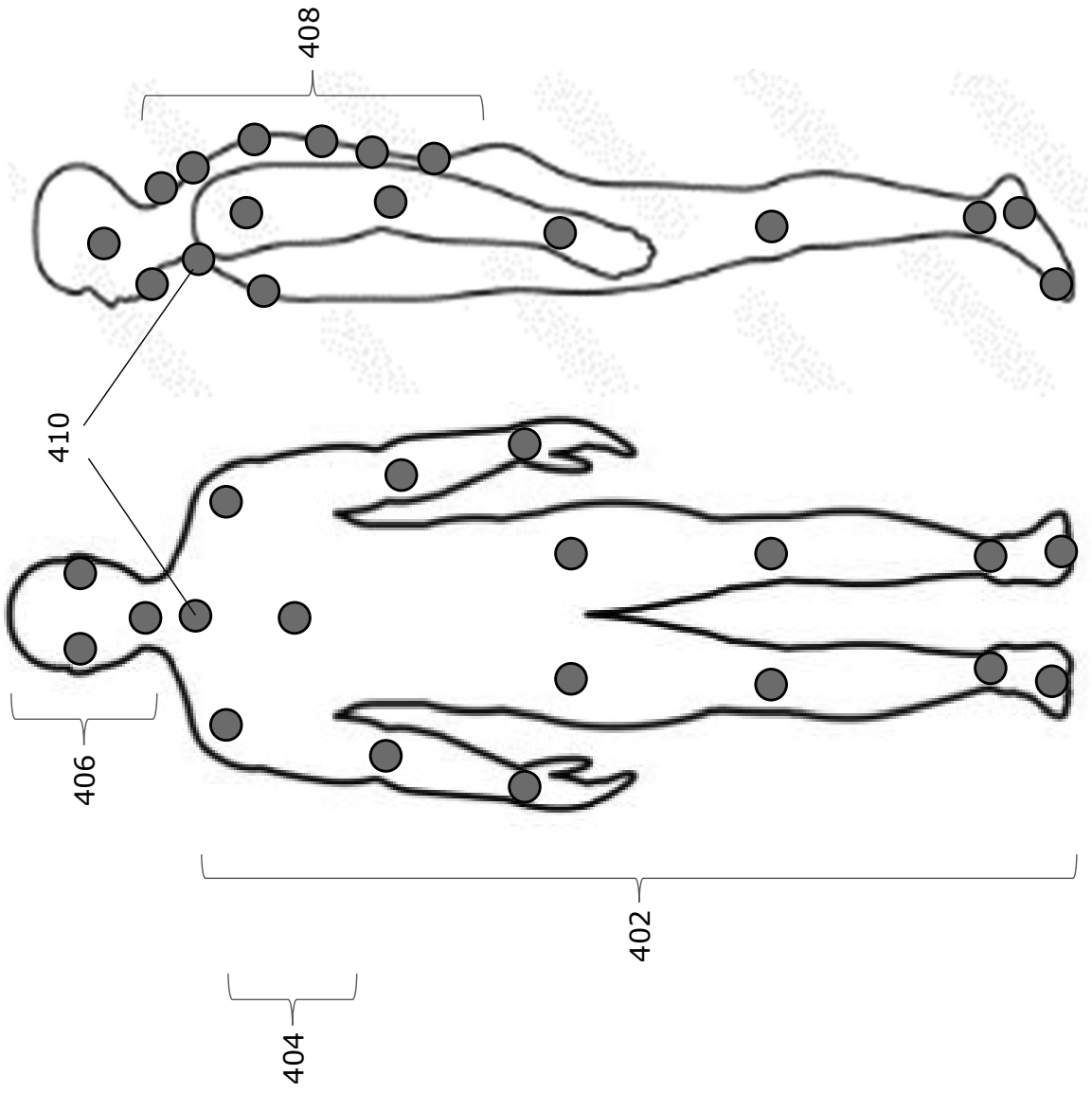


Figure 4

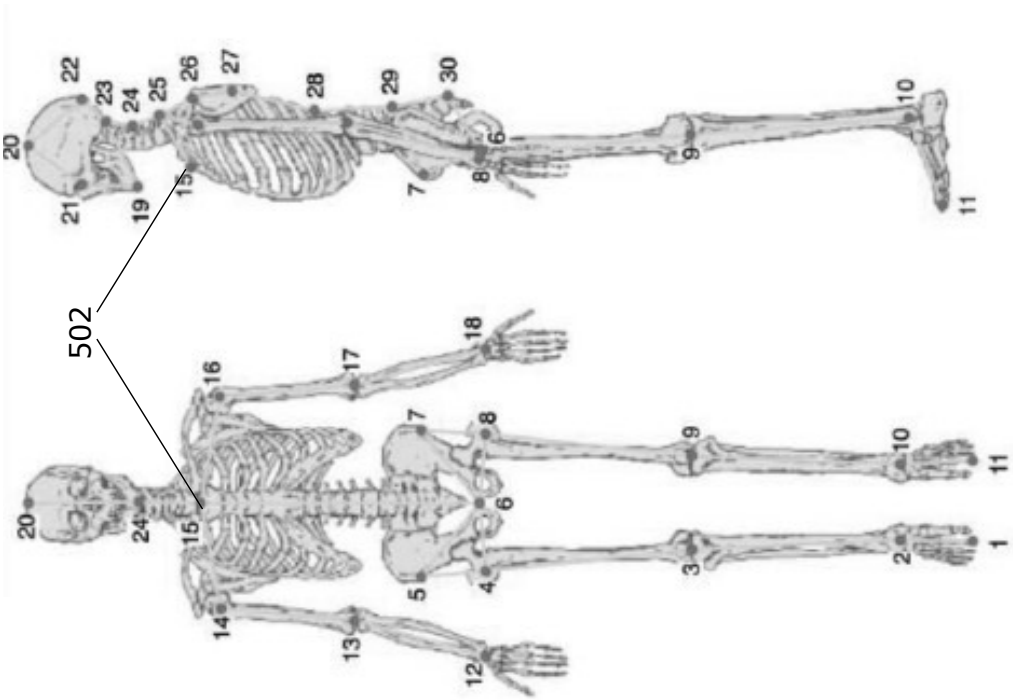
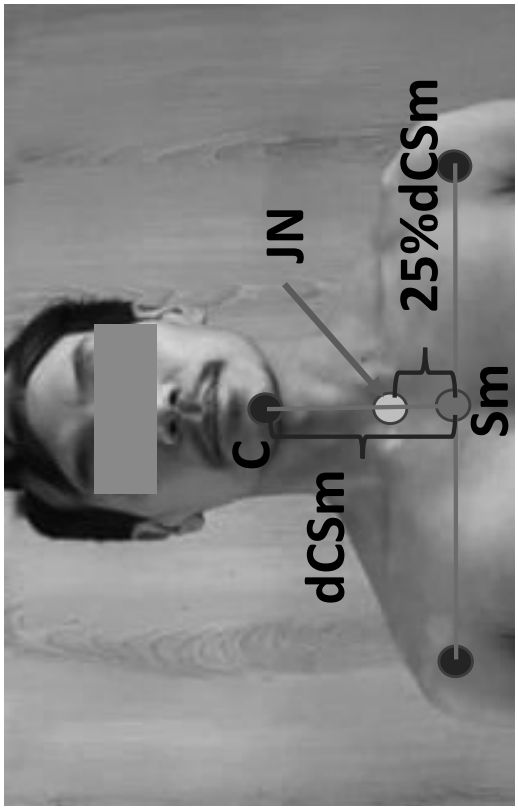
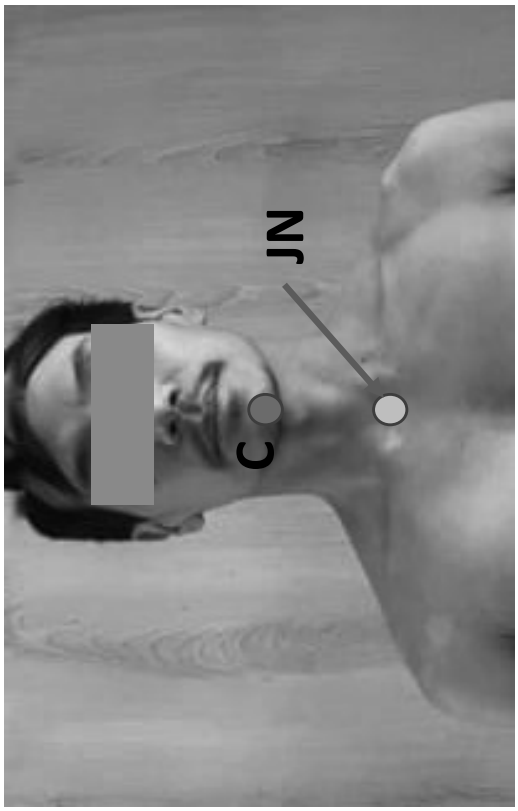


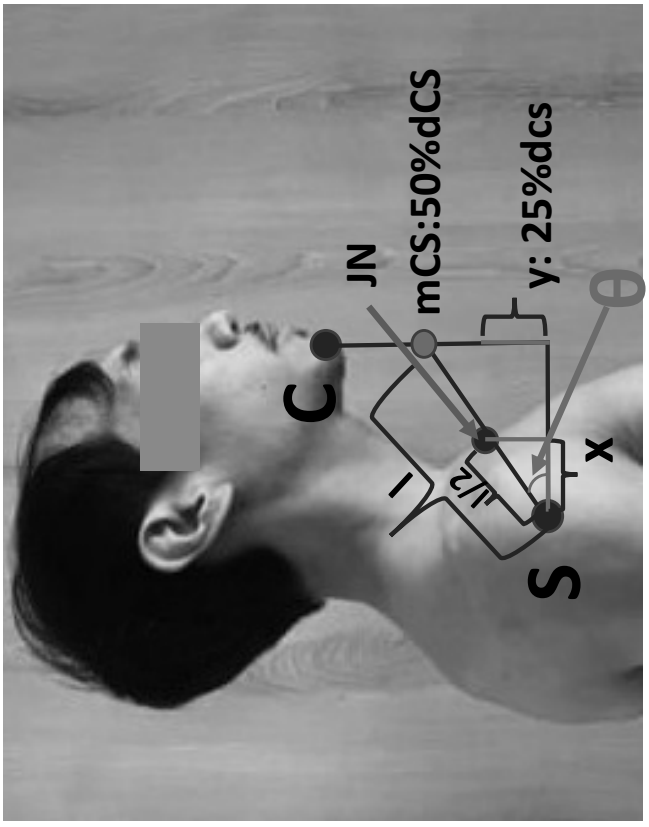
Figure 5





600

Figure 6



700

Figure 7

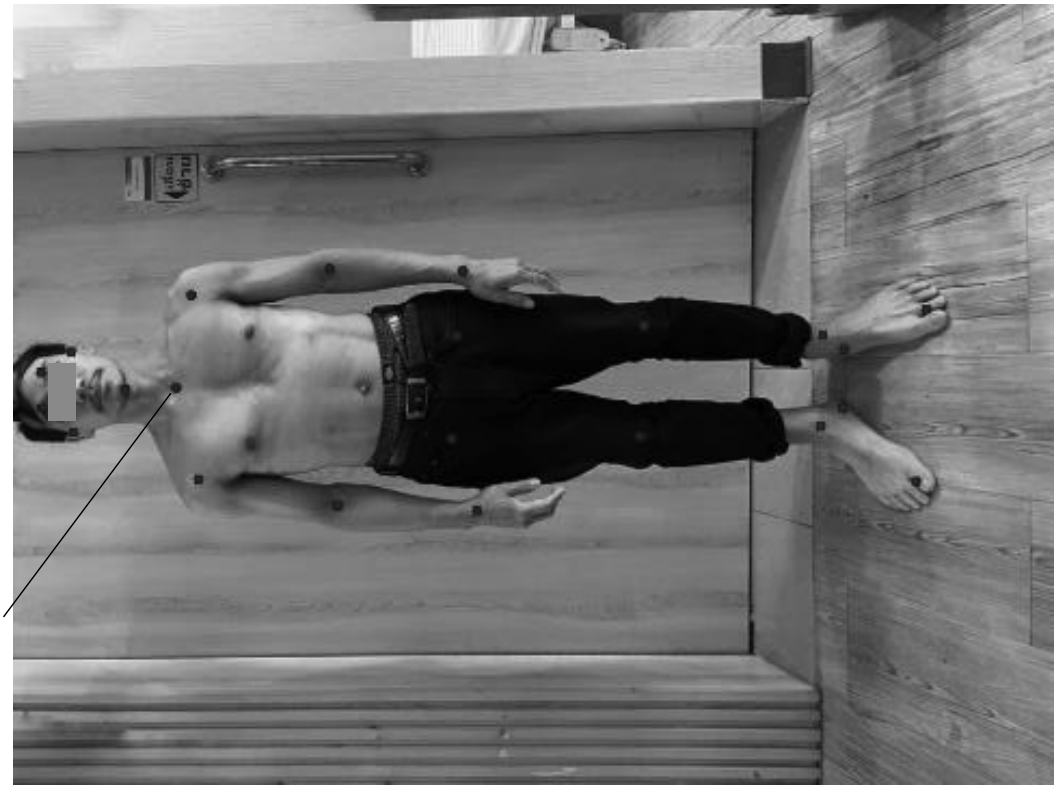


Figure 8

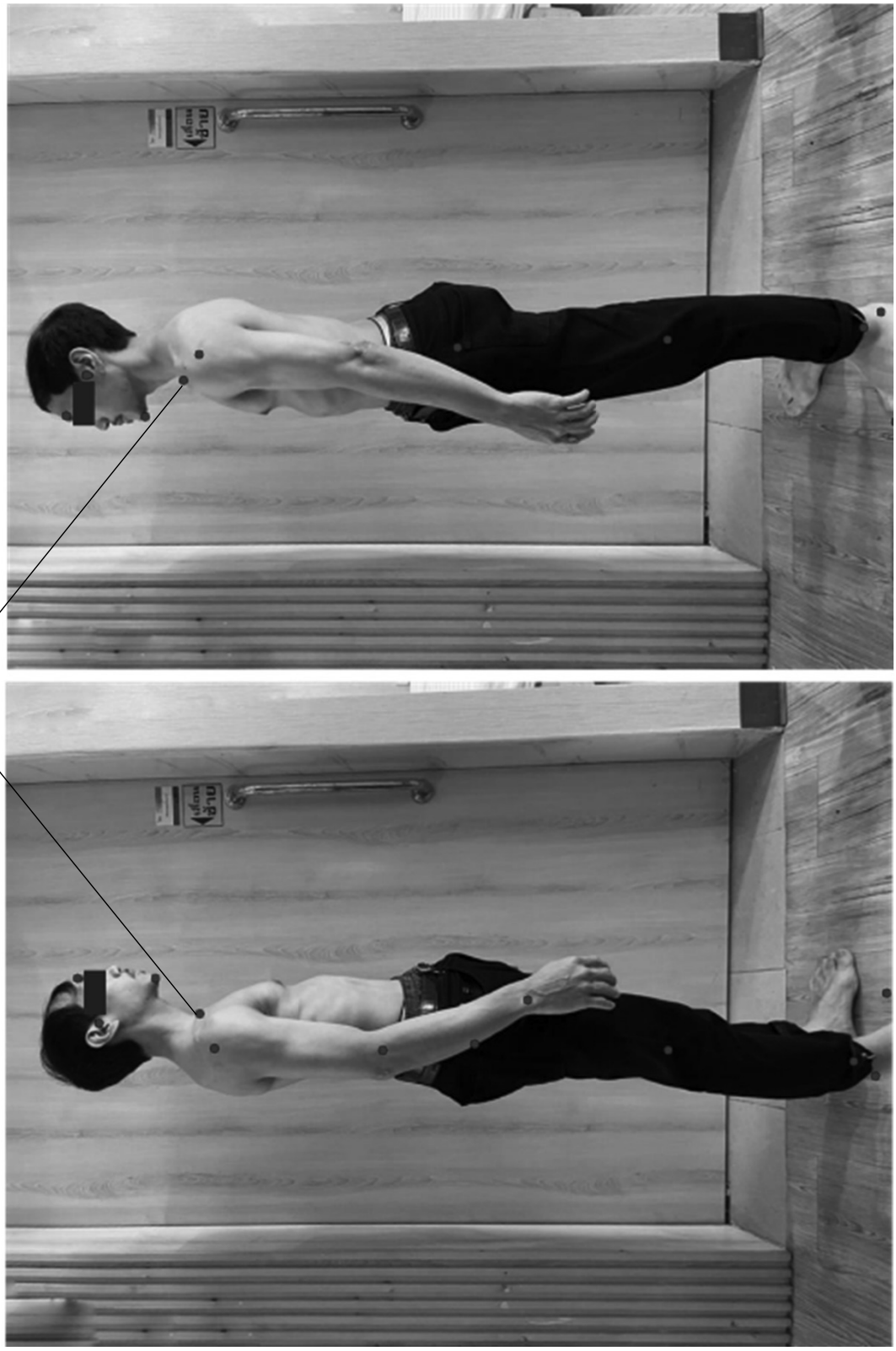
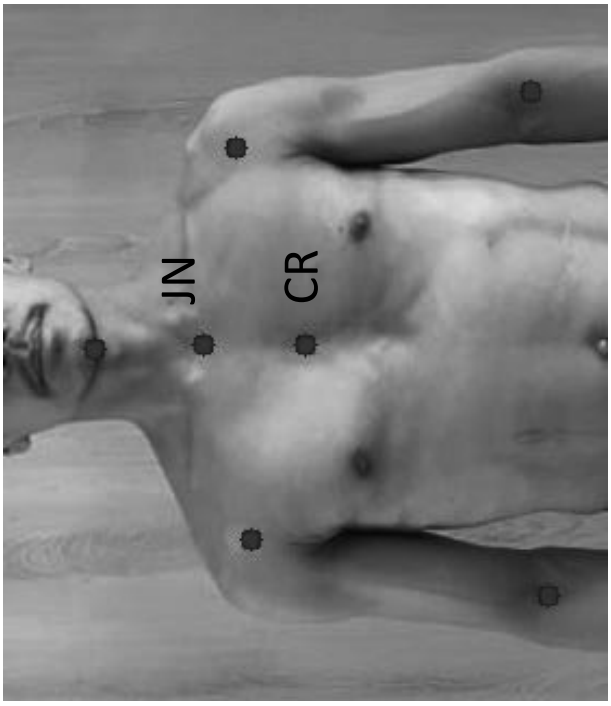


Figure 9



1000

Figure 10

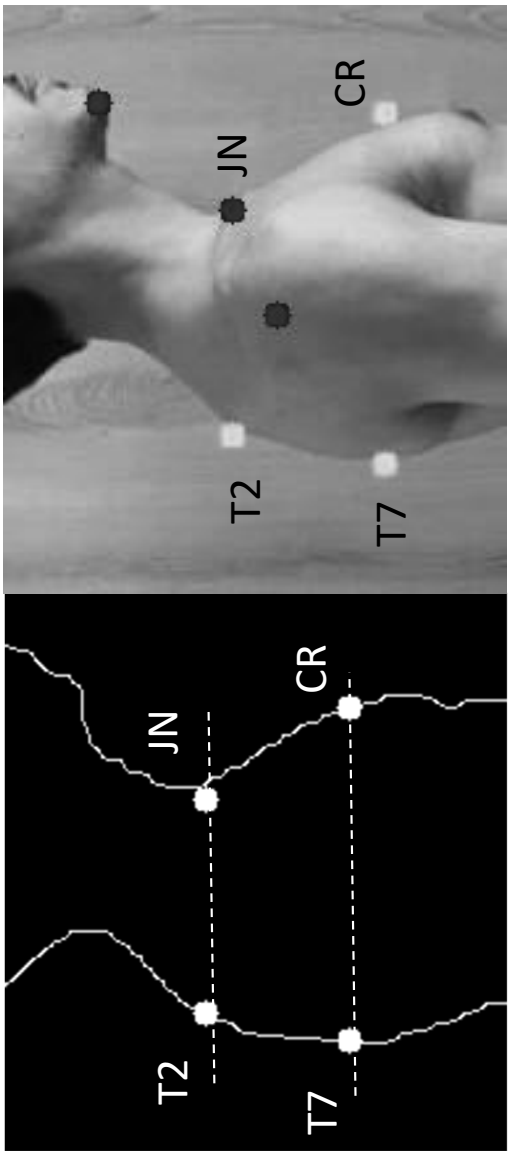


Figure 11A

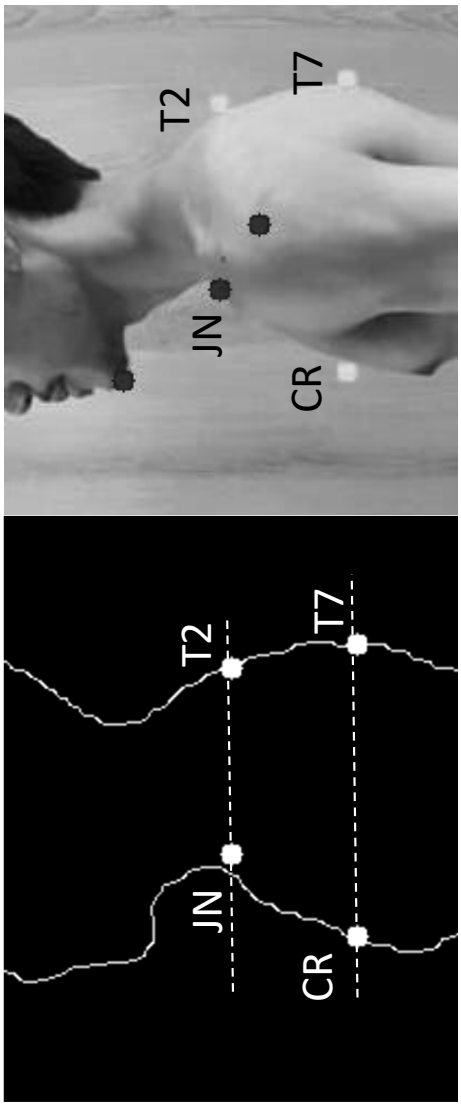
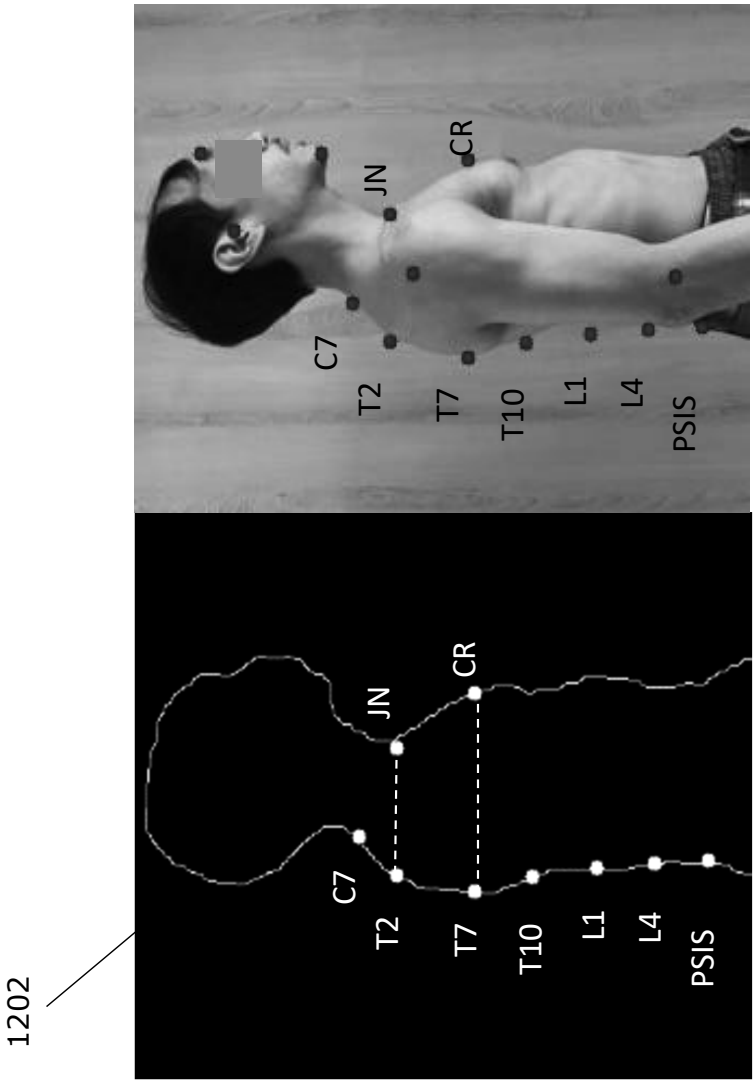


Figure 11B



Right lateral view

1200

Figure 12

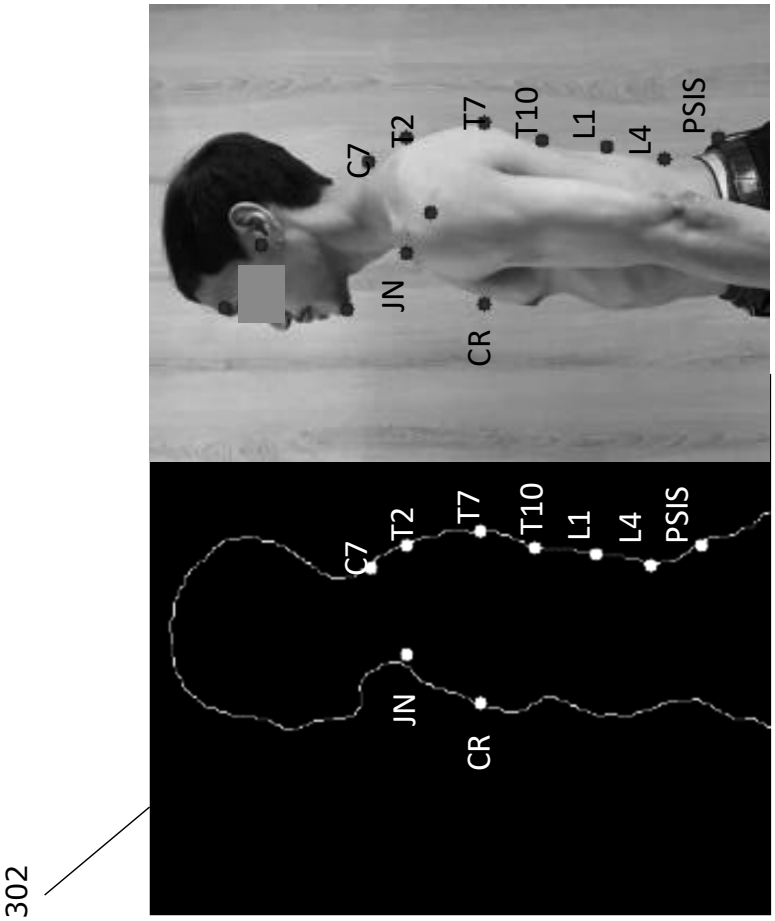

C7
T2
T7
T10
L1
L4
PSIS
JN
CR
C7
T2
T7
T10
L1
L4
PSIS
JN
CR
1302
Left lateral view
1300

Figure 13



Figure 14

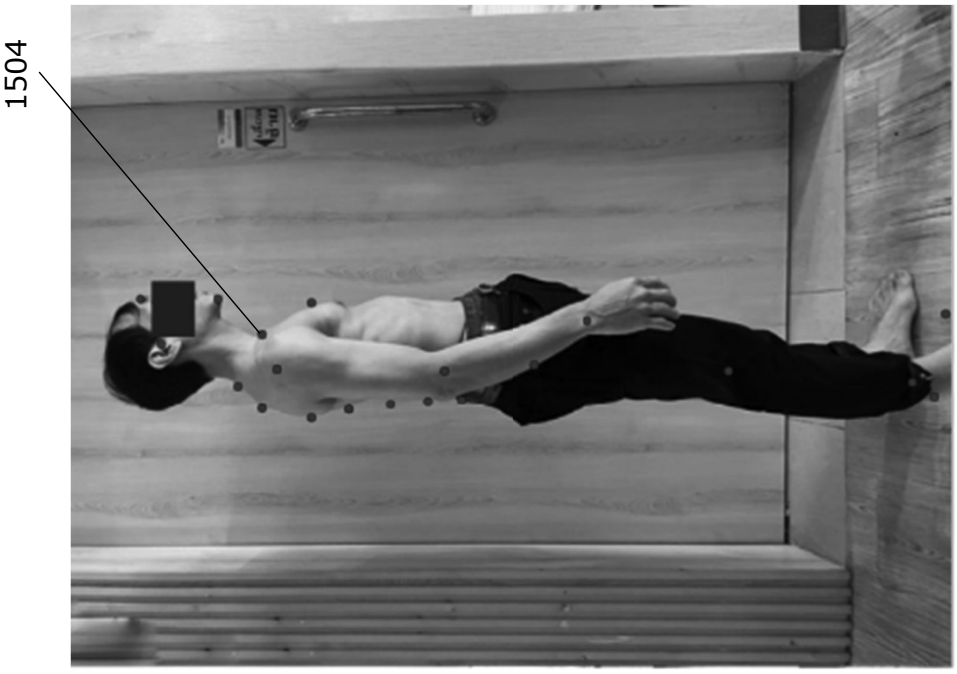


Figure 15B

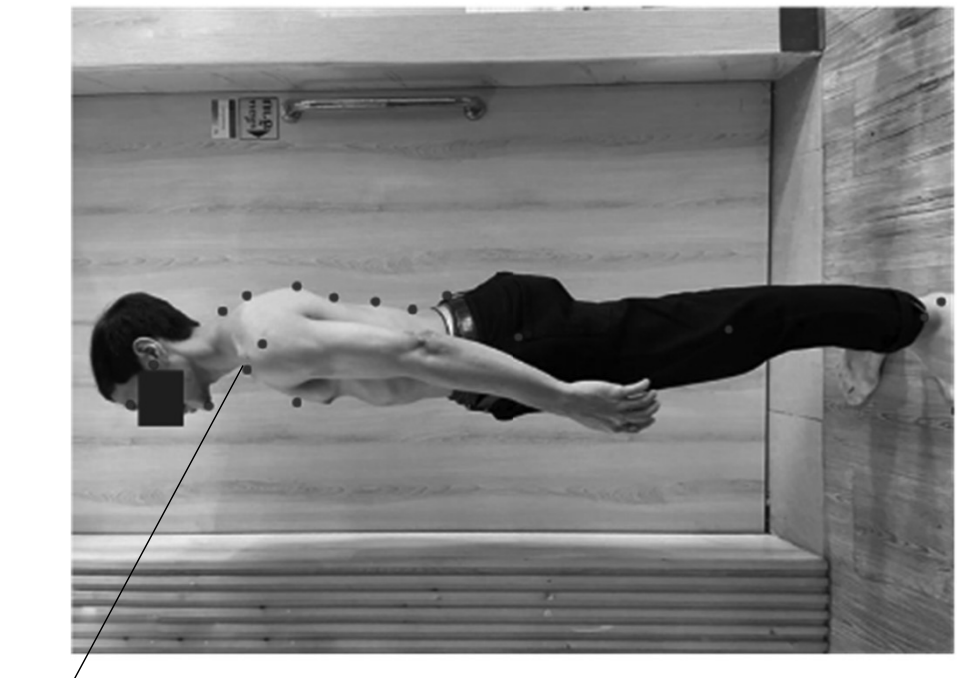


Figure 15A

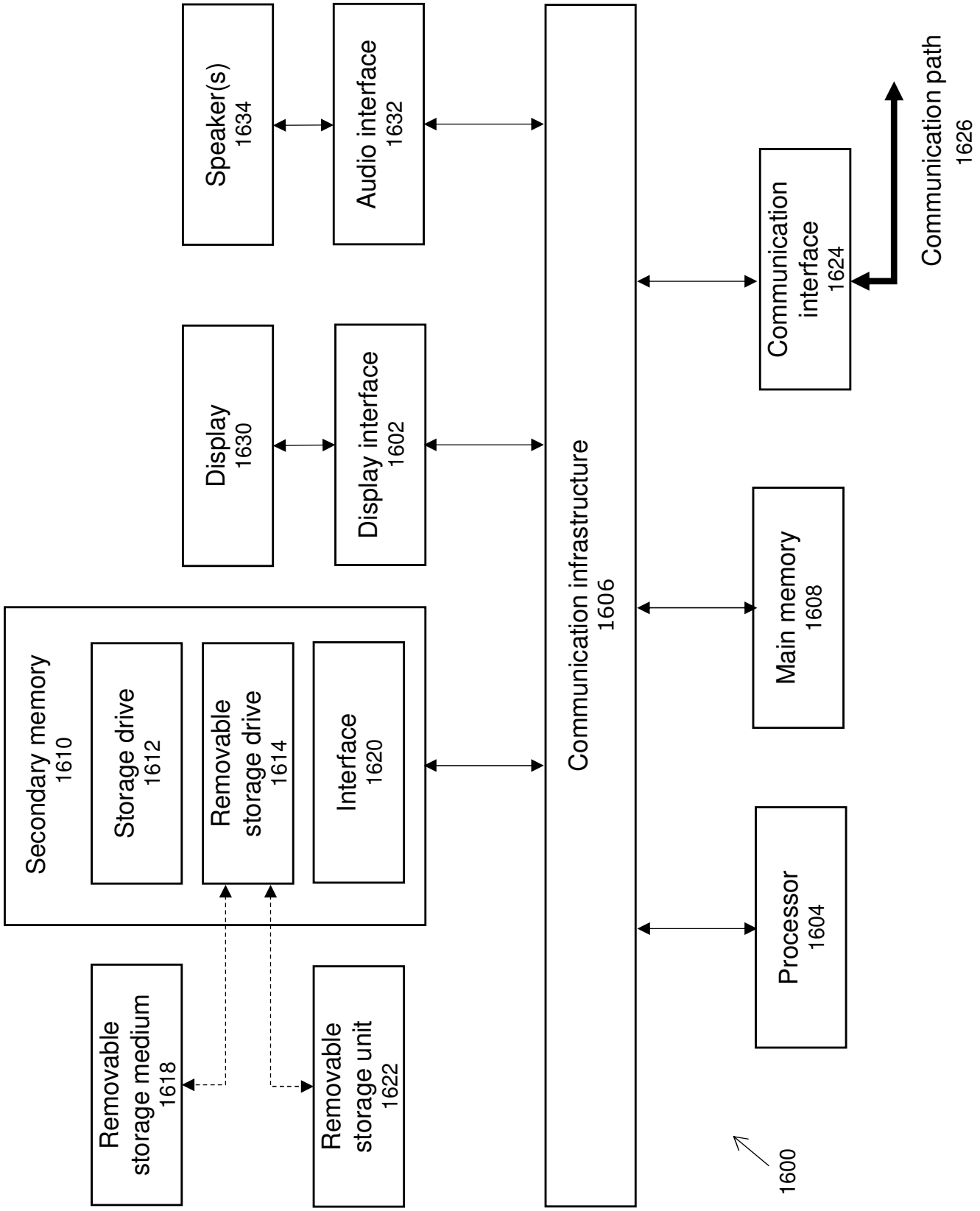

Speaker(s)
1634
Audio interface
1632
Display
1630
Display interface
1602
Secondary memory
1610
Storage drive
1612
Removable storage drive
1614
Interface
1620
Communication infrastructure
1606
Main memory
1608
Communication interface
1624
Communication path
1626
Removable storage medium
1618
Removable storage unit
1622
Processor
1604
1600

Figure 16