

**BMD MODEL TRAINING METHOD, BMD ABNORMALITY RISK
PREDICTION METHOD, BMD ABNORMALITY RISK LEARNING
SYSTEM, AND BMD ABNORMALITY RISK PREDICTION SYSTEM**

ABSTRACT

5 A method of training a bone mineral density (BMD) model, including a training
data retrieval step, a positioning step, and a model training step. The training data
retrieval step retrieves one or more chest X-ray images with the BMD of a person. The
positioning step locates and retrieves specific bone positions in the chest X-ray image.
The model training step trains the AI model based on the bone positions in the chest X-
10 ray image and the BMD. The specific bone position includes the first segment of the
lumbar vertebrae. The BMD is the lumbar BMD value measured by dual-energy X-ray
absorptiometry (DXA).

FIG. 1