What is claimed is:

1. A bone mineral density (BMD) model training method executed by a processing unit, comprising:

a training data retrieval step, obtaining a plurality of sets of chest X-ray images and BMD values of the same person as training data;

a positioning step, locating and retrieving X-ray images of specific bone positions from the chest X-ray images; and

a training step, training a BMD AI model based on the X-ray images of the specific bone positions and the BMD values;

wherein the specific bone positions are a 1st segment of lumbar vertebrae and a 12th thoracic vertebra; and

the BMD values are lumbar vertebra BMD values measured by dual-energy X-ray absorptiometry (DXA).

2. A BMD abnormality risk prediction method executed by a processing unit, comprising:

an inference data retrieval step, obtaining a chest X-ray image as inference data;

a positioning step, locating and retrieving X-ray images of specific bone positions from the chest X-ray image; and

an inference step, utilizing the BMD AI model as claimed in the BMD model training method of claim 1 and the X-ray images of the specific bone positions to generate a BMD prediction result, and output the BMD prediction result;

wherein the specific bone positions are a 1st segment of lumbar vertebrae and a 12th thoracic vertebra.

3. The BMD abnormality risk prediction method as claimed in claim 2, further executed by a processing unit, comprising:

an evaluation step, evaluating risk of BMD abnormality based on the BMD prediction result.

4. A BMD abnormality risk learning system, comprising:

a non-volatile memory, storing a BMD abnormality risk learning application; and

a processing unit, executing a BMD abnormality risk learning application to implement:

a training data input module, obtaining a plurality of sets of chest X-ray images and BMD values of the same person as training data;

a positioning module, locating and retrieving X-ray images of specific bone positions from the chest X-ray images; and

a AI training module, training a BMD AI model based on the X-ray images of the specific bone positions and the BMD values;

wherein the specific bone positions are a 1st segment of lumbar vertebrae and a 12th thoracic vertebra; and

the BMD values are lumbar vertebra BMD values measured by dual-energy X-ray absorptiometry (DXA).

5. A BMD abnormality risk prediction system, comprising:

a non-volatile memory, storing a BMD abnormality risk learning application; and

a processing unit, executing a BMD abnormality risk learning application to implement:

an inference data input module, obtaining a chest X-ray image as inference data;

a positioning module, locating and retrieving X-ray images of specific bone positions from the chest X-ray image; and

an inference module, utilizing a BMD AI model and the X-ray images of the specific bone positions to generate a BMD prediction result, and output the BMD prediction result;

wherein the specific bone positions are a 1st segment of lumbar vertebrae and a 12th thoracic vertebra; and

the BMD values are lumbar vertebra BMD values measured by dual-energy X-ray absorptiometry (DXA).

6. The BMD abnormality risk prediction system as claimed in claim 5, wherein the processing unit further implements an evaluation module evaluating risk of BMD abnormality based on the BMD prediction results.