

## Instruments for Measuring Internal Exposure



Stand-up whole-body counter



Scanning bed whole-body counter

Chair whole-body counter



Thyroid monitor



An instrument for measuring  $\gamma$ -rays emitted from the whole body, called a whole-body counter, is used to directly measure internal radioactivity. Whole-body counters have several types, including a stand-up type, bed type, and chair type.

Since radioactive cesium is distributed throughout the body, a whole-body counter is used to measure its amount within the body. If internal exposure by radioactive iodine is suspected, a thyroid monitor is used, as iodine accumulates in the thyroid (p.127 of Vol. 1, "Thyroid"). A radiation detector is applied to the part of the neck where the thyroid gland is situated to measure  $\gamma$ -rays emitted from there.

The time required for measurement is 1 to 5 minutes for simplified whole-body counters, 10 to 30 minutes for precision whole-body counters, and 2 to 5 minutes for thyroid monitors. (Related to p.166 of Vol. 2, "Internal Exposure Measurement Using a Whole-body Counter")

Included in this reference material on March 31, 2013

Updated on February 28, 2018