

Appendix 1

Inclusion and exclusion criteria of this study

All included patients met the following criteria: (I) being in an awake state; (II) no significant upper limb injuries (including but not limited to fractures of the shoulder or arm); (III) being able to follow instructions for arm placement; (IV) no vascular metal stents or skeletal metal fixation devices in the upper arm or shoulder; and (V) underwent thyroidectomy or fine-needle aspiration biopsy after thyroid imaging. The exclusion criteria were: (I) inability to cooperate with the CT scan, such as coma or trauma; (II) a history of severe allergies, asthma, or adverse reactions to iodinated contrast agents; (III) clinical judgment indicating no need for thyroid CT scan; (IV) incomplete thyroid CT images, such as only plain scan images; and (V) no pathological results after thyroid CT scans.

Four-point image grading scale

The grading scale ranged from 1 (severe artifact) to 4 (no artifact). The streak artifact in the thyroid gland was assessed and scored as follows: 1 indicated severe artifact causing complete obscuration of the internal and edge structures of the thyroid gland, resulting in diagnostic interference; 2 indicated moderate artifact causing partial obscuration of the internal and peripheral parts of the thyroid gland, with mild diagnostic interference; 3 indicated well-displayed internal and edge structures of the thyroid gland, with mild artifact but no image obscuration; and 4 indicated no artifact and no image obscuration.