Pictorial Review of TI-RADS Scoring System for Thyroid Nodules

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**SHAPE**
- **Taller-than-wide:** 3 points
  - Should be assessed on a transverse image with measurements parallel to sound beam for height and perpendicular to sound beam for width.
  - Visual inspection is adequate for this.
  - Anteroposterior (AP) length should be greater than the transverse (TV) length.

**MARGIN**
- **Smooth:** 0 Points
  - Well defined, smooth, curvilinear edge.
- **Ill-defined:** 0 Points
  - Note the posteriorly disappearing margin (halo) in this image.
- **Irregular:** 2 Points
  - Jagged, spiculated, or sharp angles.
  - Can be present in part of, or all of the nodule.
- **Lobulated:** 2 Points
  - Promusions into adjacent tissues.
- **Extra-thyroid Extension:** 3 Points
  - Nodule will be seen to extend beyond the thyroid capsule.

**COMPOSITION**
- **Cystic:** 0 Points
  - Cystic or almost completely cystic nodule.
- **Spongiform:** 0 Points
  - Composed predominantly (>50%) of small cystic spaces.
- **Mixed cystic and solid:** 1 Point
  - Assign points for predominant solid component.
- **Solid:** 2 Points
  - Entirely or nearly entirely soft tissue with only a few tiny cystic spaces.

**ECHOGENICITY**
- **Anechoic:** 0 Points
  - Applies to cystic or almost completely cystic nodules.
- **Hyperechoic:** 1 Point
  - Increased echogenicity relative to the thyroid tissue.
- **Isoechoic:** 1 Point
  - Similar echogenicity relative to the thyroid tissue.
- **Hypoechoic:** 2 Points
  - Decreased echogenicity relative to the thyroid tissue.
- **Very Hypoechoic:** 3 Points
  - Decreased echogenicity relative to the adjacent neck musculature.

**ECHOGENIC FOCI**
- **Comet-tail artefacts:** 0 Points
  - V-shaped, >1 mm, in cystic components.
- **Macrocalcifications:** 1 Point
  - Calcifications with posterior acoustic shadowing.
- **Peripheral Calcifications:** 2 Points
  - Calcifications at periphery of the nodule. Complete or incomplete along margin.
- **Punctate Calcifications:** 3 Points
  - < 1 mm with no posterior acoustic shadowing.

**TI-RADS Points**
- **TR1**
  - Benign
  - No FNA
  - 1 Point
- **TR2**
  - Not suspicious
  - No FNA
  - 2 Points
- **TR3**
  - Mildly suspicious
  - FNA if ≥ 2.5cm
  - Follow if ≥ 1.5cm
  - 3 Points
- **TR4**
  - Moderately Suspicious
  - FNA if ≥ 1.5cm
  - Follow if ≥ 1cm
  - 4-6 Points
- **TR5**
  - Highly Suspicious
  - FNA if ≥ 1cm
  - Follow if ≥ 0.5cm
  - 7+ Points

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