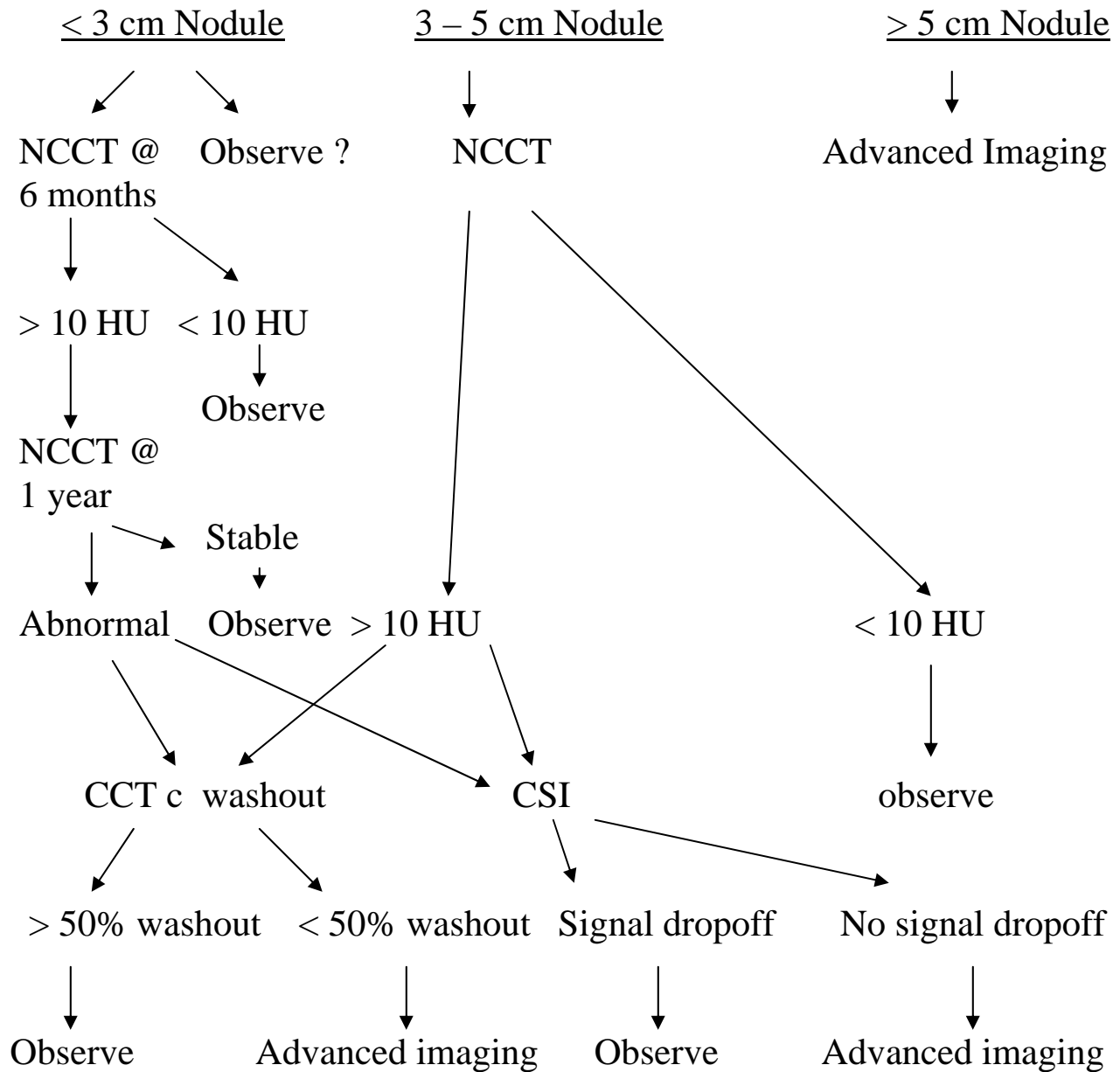


Workup of Adrenal Incidentaloma

- Asymptomatic
- No History of Malignancy
- Smooth, homogeneous nodule



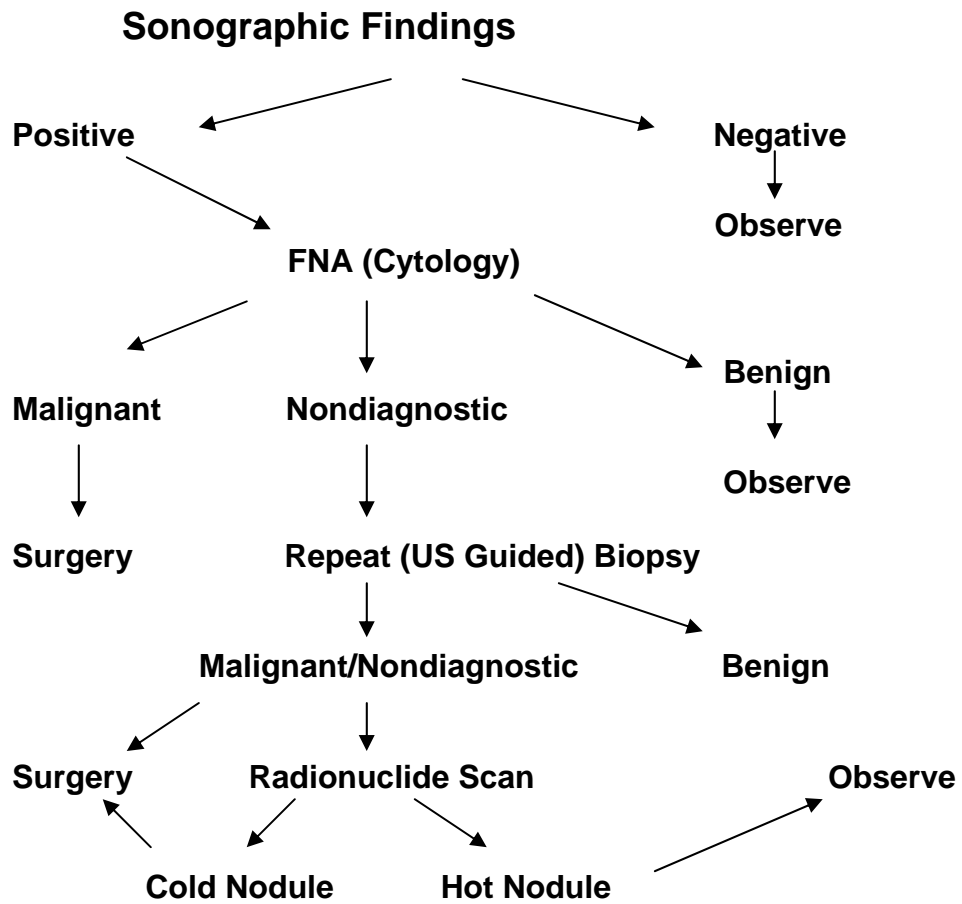
Advanced Imaging: PET/CT, Radionuclide Studies, Biopsy

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Workup of Thyroid Nodule

Thyroid Nodule Workup



“Management of Thyroid Nodules Detected at US: Society of Radiologists in Ultrasound Consensus Conference Statement1 Mary C. Frates” *Radiology* 2005;237:794-800

Recommendations for Thyroid Nodules 1 cm or Larger in Maximum Diameter

US Feature	Recommendation
SOLITARY NODULES	
Microcalcifications	Strongly consider US-guided FNA if ≥ 1 cm
Solid (or almost entirely solid) or coarse calcifications	Strongly consider US-guided FNA if ≥ 1.5 cm
Mixed solid and cystic or almost entirely cystic with solid mural component	Consider US-guided FNA if ≥ 2 cm
None of the above but substantial growth since prior US examination	Consider US-guided FNA
Almost entirely cystic and none of the above and no substantial growth (or no prior US)	US-guided FNA probably unnecessary
MULTIPLE NODULES	Consider US-guided FNA of one or more nodules, with selection prioritized on basis of criteria (in order listed) for solitary nodule*

Note.—FNA is likely unnecessary in diffusively enlarged gland with multiple nodules of similar US appearance without intervening parenchyma. Presence of abnormal lymph nodes overrides US features of thyroid nodule(s) and should prompt US-guided FNA or biopsy of lymph node and/or ipsilateral nodule.

* Panel had two opinions regarding selection of nodules for FNA. The majority opinion is stated here.

Bibliography (Thyroid)

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Pulmonary Nodule Workup

Nodule Size (mm)*	Low-Risk Patient	High-Risk Patient
≤4	No follow-up needed*	Follow up CT at 12 mo; if unchanged, no further follow-up
>4-6	Follow-up CT at 12 mo; if unchanged, no further follow-up	Initial follow-up CT at 6-12 mo, then at 18-24 mo if no change
>6-8	Initial follow-up CT at 6-12 mo, then at 18-24 mo if no change	Initial follow-up CT at 3-6 mo then at 9-12 and 24 mo if no change
>8	Follow-up CT at around 3, 9, and 24 mo, dynamic contrast-enhanced CT, PET, and/or biopsy	Same as for low-risk patient

"Note.-Newly detected indeterminate nodule in persons 35 years of age or older. * Average of length and width. Minimal or absent history of smoking and of other known risk factors. History of smoking or of other known risk factors. The risk of malignancy in this category (<1%) is substantially less than that in a baseline CT scan of an asymptomatic smoker. || Nonsolid (ground-glass) or partly solid nodules may require longer follow-up to exclude indolent adenocarcinoma."

Bibliography (Pulmonary)

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Bibliography (Renal)

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Renal Mass Evaluation

Category	Criteria and Management
I	A benign simple cyst with a hairline-thin wall that does not contain septa, calcifications, or solid components; it has water attenuation and does not enhance; no intervention is needed
II	A benign cystic lesion that may contain a few hairline-thin septa in which perceived (not measurable) enhancement may be appreciated; fine calcification or a short segment of slightly thickened calcification may be present in the wall or septa; uniformly high-attenuating lesion (<3cm) that are sharply marginated and do not enhance are included in this group; no intervention is needed
IIF†	Cysts may contain multiple hairline-thin septa; perceived (not measurable) enhancement of a hairline-thin smooth septum or wall can be identified; there may be minimal thickening of wall or septa, which may contain calcification that may be thick and nodular, but no measurable contrast enhancement is present (45); there are no enhancing soft-tissue components; totally intrarenal nonenhancing high-attenuating renal lesions (>3cm) are also included in this category; these lesions are generally well marginated; they are thought to be benign but need follow-up to prove their benignity by showing stability (46)*
III	Cystic masses with thickened irregular or smooth walls or septa and in which measurable enhancement is present; these masses need surgical intervention in most cases, as neoplasm cannot be excluded; this category includes complicated hemorrhagic or infected cysts, multilocular cystic nephroma, and cystic neoplasms; these lesions need histologic diagnosis, as even gross observation by the urologist at surgery or the pathologist at gross pathologic evaluation is frequently indeterminate
	Clearly malignant cystic masses that can have all of the criteria of category III but also contain distinct enhancing soft-tissue components independent of the wall or septa; these masses are clearly malignant and need to be removed
IV	<p>*Perceived enhancement refers to enhancement of hairline-thin or minimally thickened walls or septa that can be visually appreciated when comparing unenhanced and contrast-enhanced CT images side-by-side and on subtracted MR imaging datasets. This “enhancement” occurs in hairline-thin or smooth minimally thickened septa/walls and, therefore, cannot be measured or quantified. The authors believe tiny capillaries supply blood (and contrast material) to these septa/walls, which are appreciated because of higher doses of intravenous contrast material and thinner CT and MR imaging sections.</p> <p>†“F” indicates follow-up needed.</p> <p>"Bosniak Criteria for Renal Masses" How I Do It: Evaluating Renal Masses Gary M. Israel, MD and Morton A. Bosniak, MD From Radiology 2005;236:441-450</p>



