

# ABR Exam of the Future

Update RSNA 2008

# Exam of the Future (EOF): Structure

Core examination

Certifying examination

# EOF: Core Examination

Given at 36 months

Covers all of diagnostic radiology

Only comprehensive exam in EOF

Candidate must pass every category to qualify for certifying examination

Level of knowledge expected:  
basic/intermediate

# EOF: Core Examination— Categories

Organ systems:

MSK, Cardiac, Thoracic, Gastrointestinal,  
Urinary, Endocrine/Reproductive, Neurologic,  
Pediatric, Breast, Vascular

Imaging methods:

RF/fluoro, CT, MR, US, Nuclear  
radiology/molecular imaging, interventional

Fundamental radiologic concepts:

Physics, patient safety

# EOF: Examination Blueprint

	Breast	Cards	GI	MSK	Neuro	Peds	Thorax	Repro/endo	Urinary	Vasc	Q#
CT	0										
IR											
MR											
NM/Molecular											
Radiography & Fluoroscopy											
US								25		15	
Physics											90
Safety											
Q#											

Minimum of 45 questions if category  
is to be scored separately

# EOF: Core Exam—Physics Content

Will include a minimum of 90 questions

Each category will have embedded physicist

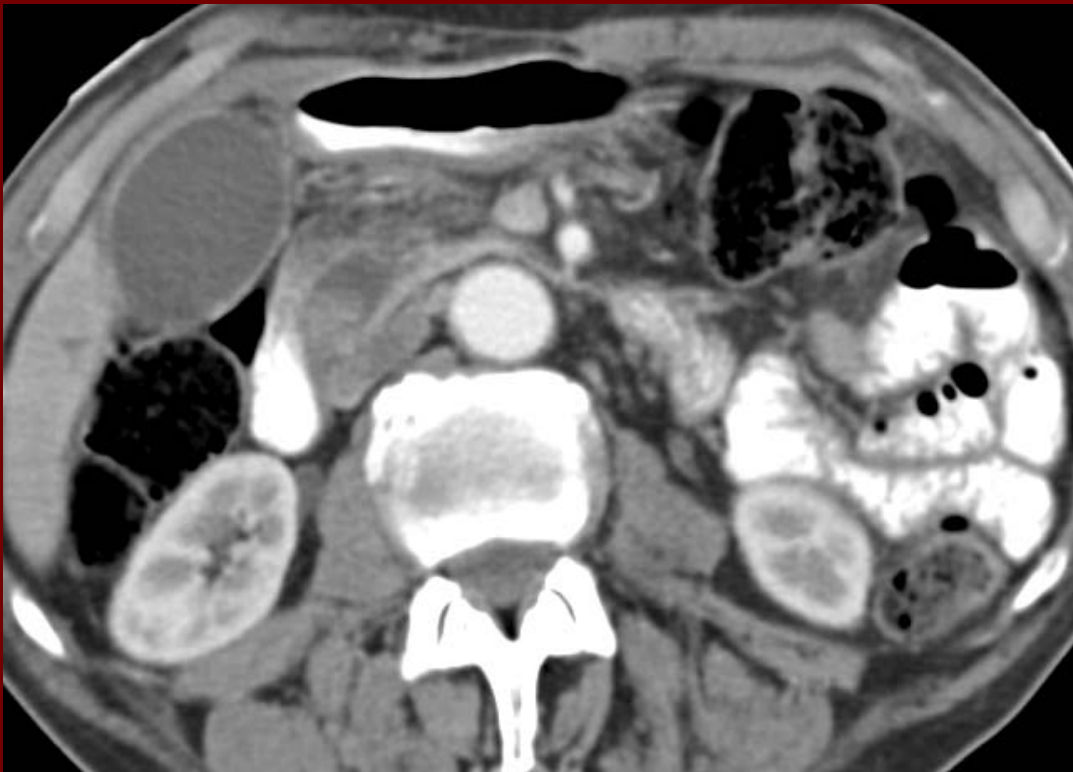
Questions will be based on practical imaging

How can image quality be improved?

What is the source of this artifact?

How would you design this examination to minimize needless radiation exposure?

# EOF: Core Exam—Example Physics Question



Repeat CT is requested to determine whether the CBD lesion is a tumor or a stone. What is the most appropriate maneuver?

- a) Decrease kVp
- b) Increase kVp
- c) Decrease mas
- d) Increase mas
- e) Buy a new machine

# Update on Physics Activities

## Curriculum

Revision completed: [www.aapm.org](http://www.aapm.org)

Teaching objectives: spring 2009

SAM questions matched to curriculum

## Web-based modules

Phase 1 (complete by September '09)

- X-ray, CT, Nucs, US, MR, Biology
- 32 modules developed by radiologist/physicist

Phase 2 (target June '10)

- Processing, display, quality, perception, PACS
- 30 additional modules

Improved teaching by physicists (August '08)

# EOF: Core Exam—Scoring

Each organ system

Each method

Patient safety, physics



Scored pass/fail

Assuming sufficient breadth of content that  
a confident pass/fail decision is possible

Minimum 45 questions/category

# EOF: Core Exam—Contrast with Current Written Exam

## Written exam

- Fact retrieval only

- Individual organ systems and imaging methods not separately evaluated

- ? Relevance of some physics questions

## Core exam

- Roughly 40% fact retrieval

- Comprehensive, all systems/methods scored

- Questions based on specific images

# EOF: Core Exam—Contrast With Oral Exam

## Oral exam

Observation

Synthesis

Management

Communication

## Core exam

60% will test all of the above

Communication skills?

# EOF: Core Exam—Content

Entire spectrum of diagnostic radiology

Basic/intermediate level\*

Probably at least 500 questions

Administered over 1½ days

\*Clearly needed: a curriculum for every scorable category

# EOF: Core Exam—Conditions of Contest

Pass all categories:	Pass
Fail X categories:	Condition
Fail $>$ X categories:	Fail

Conditioned candidates retake only the failed category(ies)

Failed candidates retake entire exam

Both will be offered in six months

# EOF: Core Exam—Effects on Training Programs

ABR-RRC meeting yearly

All residents exposed to every clinical category to be tested

Board preparation displaced into 3<sup>rd</sup> year

Structure of 4<sup>th</sup> year

Smaller programs—may be no change

Larger programs—may be competition for highly sought clinical subspecialties

# EOF: Core Exam—What We Need



# EOF: Core Exam—What We Need

Written curricula for all categories

About 100 item-writers

About 2000 questions before 2013

Sage advice from all of you

Goodwill of the radiology community

# EOF: Certifying Exam— Underlying Duality

Conceived as the first MOC exam, but also

Final certifying exam given by ABR

Must pass test of public scrutiny

Must test competencies

Need not test entire breadth of radiology

# EOF: Certifying Exam

Given 15 months after residency graduation

Will contain 5 modules

Noninterpretive skills (common to physicians)

Essentials of radiology (common to radiologists)

3 modules chosen by candidate

- General radiology
- Subspecialty radiology

# EOF Certifying Exam—Content

Emulate practice of radiologist at work

Some normal exams

Many “real-life” decisions

- Differential (not single) diagnoses
- Management decisions

More complicated question types

Many possible right answers

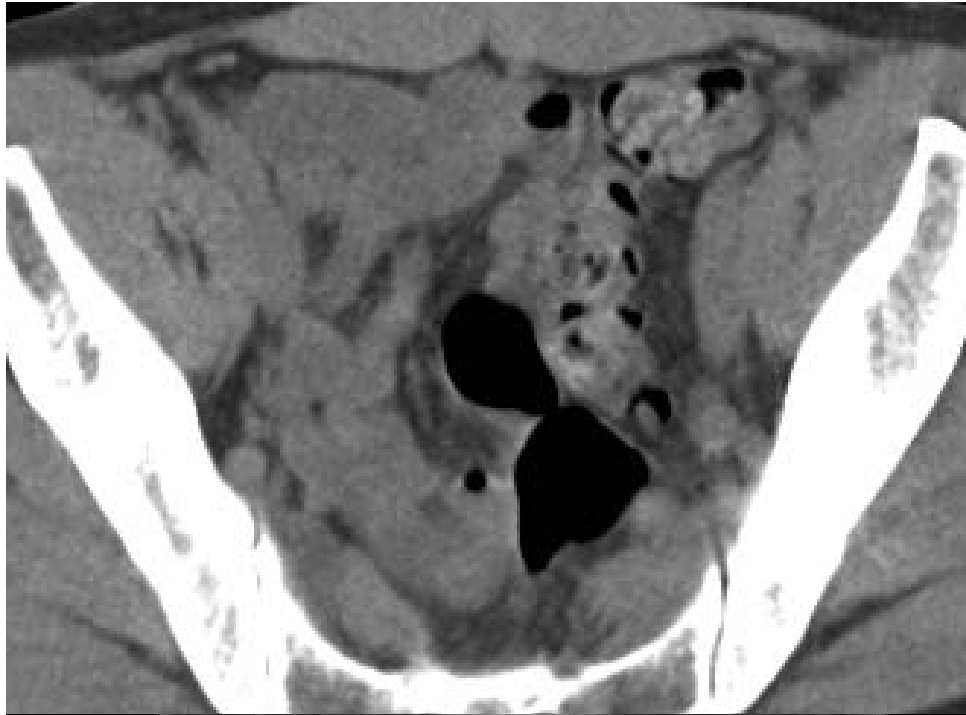
Layout mimicking real patient workups

# EOF: Certifying Exam—Example Case

A 43 year old man experienced intermittent episodes of hematochezia. Capsule endoscopy showed angiodysplastic changes in the ileal mucosa. Which of the following radiologic examinations is MOST appropriate for further evaluation

- a) CT enterography
- b) MR enterography
- c) Selective mesenteric angiography
- d) Enteroclysis

Warning: Once you have made a selection, you may not return to this screen



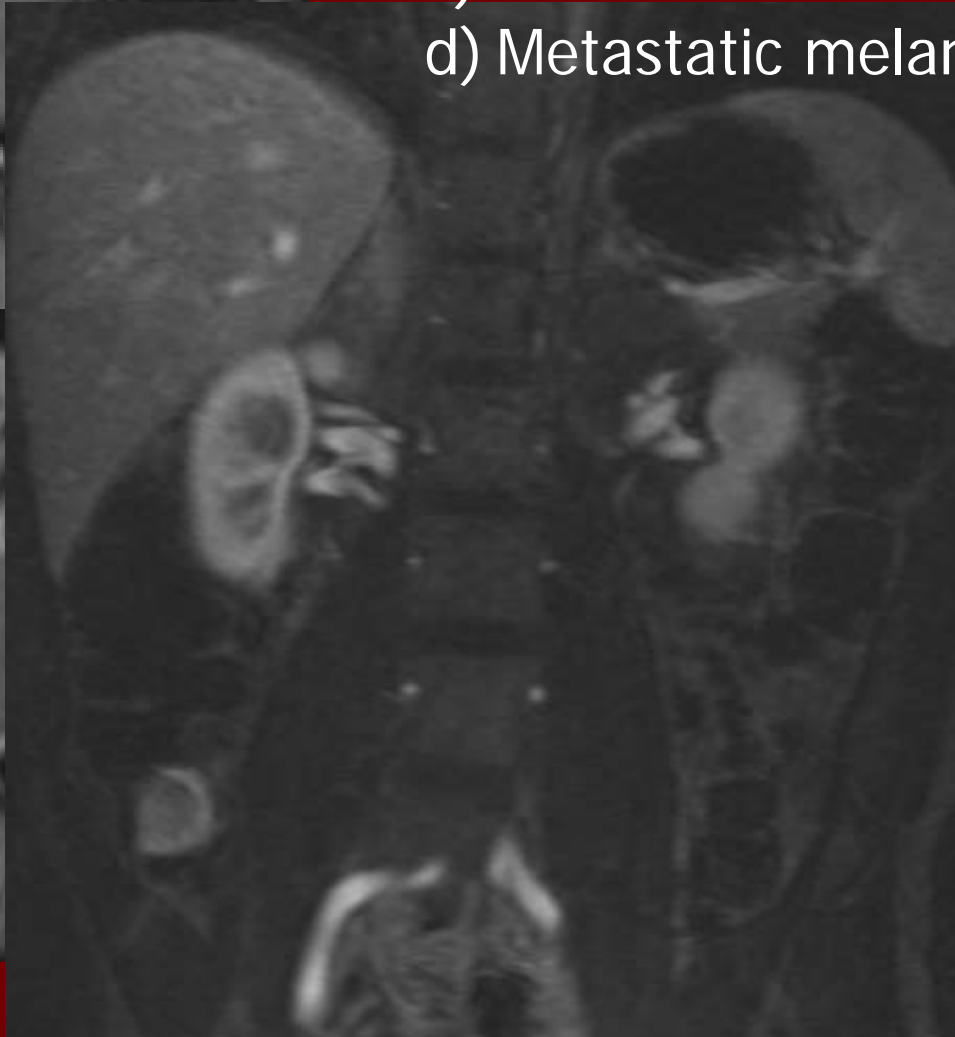
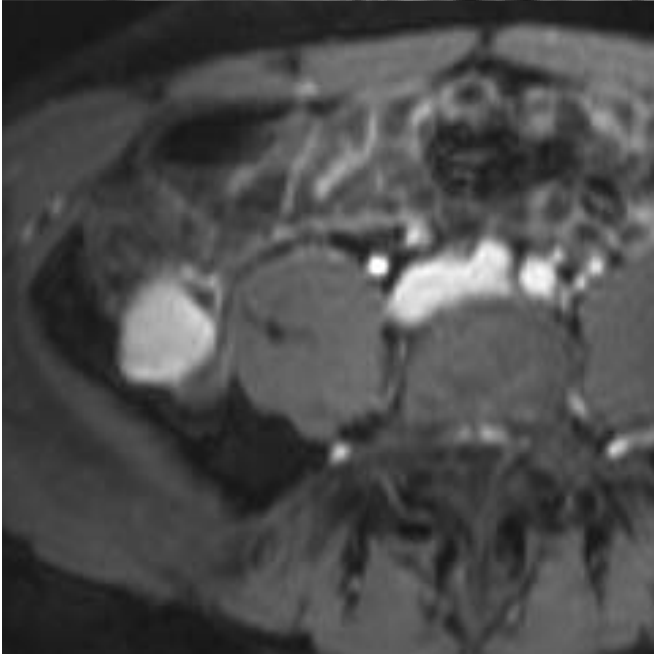
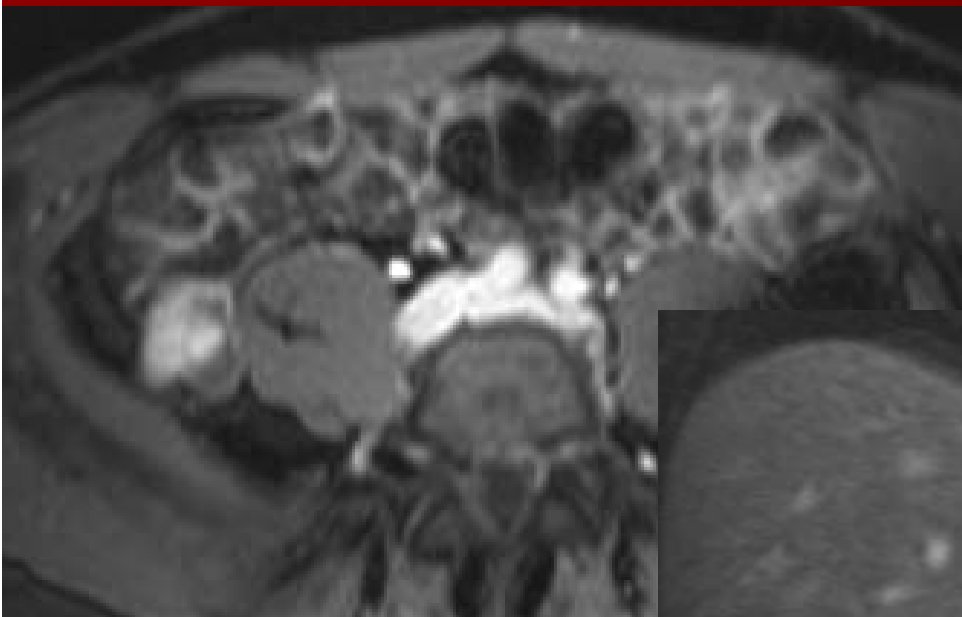
What is the MOST likely diagnosis?

- a) Carcinoid
- b) GI stromal tumor
- c) Adenocarcinoma
- d) Metastatic melanoma



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# EOF: Certifying Exam—To Be Determined

Number and name of the categories

Length of the exam

Must cover the category domain

Must not be intolerably long

Conditions of contest

Must pass noninterpretive, essentials

Condition or fail clinical modules

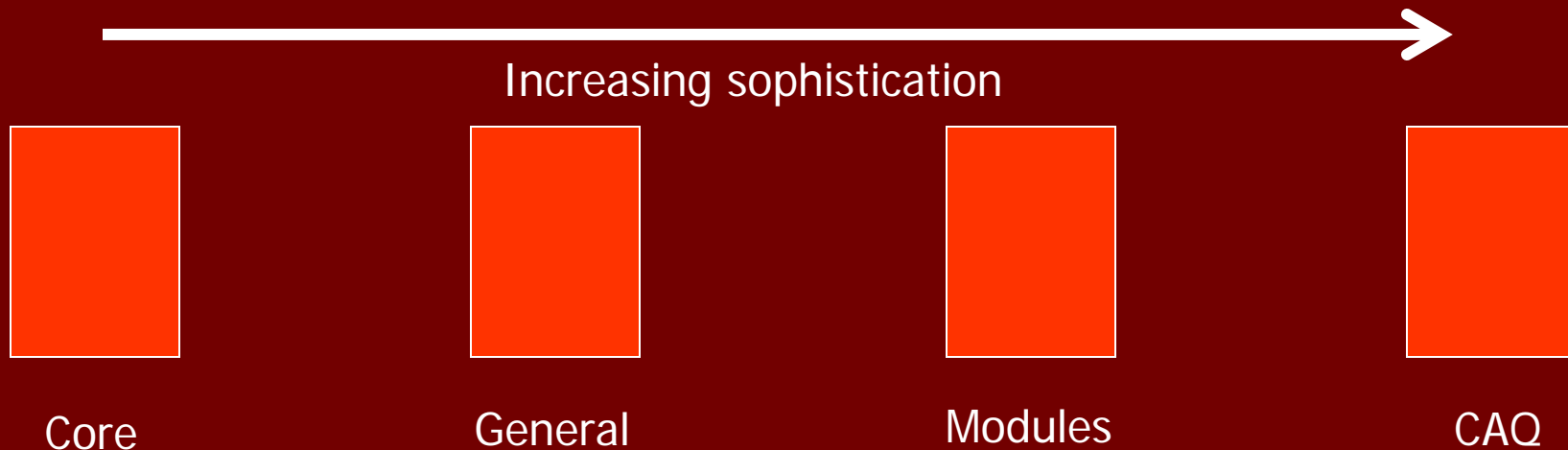
Retakes offered in six months

# EOF: Certifying Exam—What We Need

Even more help!

Sufficient material and question-writing expertise to create graded spectrum of sophistication within every category

Example: Neuroradiology content



# EOF: Certifying Exam—Effect on Training Programs

Restructured 4<sup>th</sup> year

Depends on size and orientation

Will not include Boards frenzy

Effect on Fellowships

Research-oriented

Narrowly defined

# EOF: Final Thoughts

ABR mission, to protect the public, is vital

No part of its mission is possible without the work of hundreds of volunteers

Thanks to everyone who has or will contribute their cases and writing expertise to continue our mission

If we are to survive, we must establish the culture of lifelong learning in each of our diplomates