

## SAUDI BOARD RESIDENCY TRAINING PROGRAM

### DIAGNOSTIC RADIOLOGY

#### Promotion Examination

##### Written Examination Format:

- A written examination consists of 25 questions, the exam for first, second and third year resident each for of levels as SAQ (short assay questions).
- The examination contains type K2 questions (interpretation, analysis, reasoning and decision making) and type K1 questions (recall and comprehension).
- The examination includes basic concepts and clinical topics relevant to the specialty.
- Anatomy questions; include the normal anatomy, mark-lines and normal variants. Materials and Technical questions; including material properties, usage, and selection of instruments and equipment used as well as the technical errors & artefacts. Health maintenance questions; include health promotion, disease prevention, risk factors assessment, and prognosis. Diagnosis and investigation questions; include the possible diagnosis and diagnostic methods. Management questions; including clinical management, either therapeutic or non-therapeutic.

##### Passing Score for Promotion Exam:

The trainee's performance is assessed in each of the evaluation formulas according to the following scoring system:

Score	Less than 50%	50% – 59.4%	60% - 69.4%	More than 70%
Description	Clear Fail	Borderline Fail	Borderline Pass	Clear Pass

1. To upgrade the trainee from a training level to the next level, She/he must obtain at least a **Borderline Pass** in each evaluation form.
2. The program director may recommend to the local supervision committee to request the promotion of the trainee who did not meet the previous promotion requirement according to the following:
  - A. In case that the trainee gets a **borderline Fail** result in **one** of the evaluation forms, the remaining evaluation forms must be passed with **Clear Pass** in at least **one** of them.
  - B. In case that the trainee gets a **borderline Fail** result in **two** of the evaluation forms to a maximum, provided they do not fall under the same theme (Knowledge, Attitude, Skills). The remaining evaluation forms must be passed with **Clear Pass** in at least **two** of them.
  - C. The promotion must be approved in this case by the scientific council for the specialization.


**Blueprint Outlines**

No.	<b>R1</b>	Sections	Percentage
1		Musculoskeletal	16%
2		Neuroradiology	10%
3		Head and neck and spine	5%
4		Cardiothoracic	12%
5		Gastrointestinal	8%
6		Genitourinary	8%
7		Nuclear Medicine	5%
8		Anatomy	24%
9		Technical	12%
<b>Total</b>			<b>100%</b>

No.	<b>R2</b>	Sections	Percentage
1		Musculoskeletal	12%
2		Neuroradiology	8 %
3		Head and neck and spine	5%
4		Cardiothoracic	12%
5		Gastrointestinal AND Genitourinary	18%
6		Vascular & Interventional	8%
7		Pediatrics	8%
8		Nuclear Medicine	8%
9		Breast Imaging	8%
10		Anatomy and Technical	8%
11		US	5%
<b>Total</b>			<b>100%</b>

No.	<b>R3</b>	Sections	Percentage
1		Musculoskeletal	12%
2		Neuroradiology	8 %
3		Head and neck and spine	5%
4		Cardiothoracic	12%
5		Gastrointestinal	12%
6		Genitourinary	8%
7		Vascular & Interventional	8%
8		Pediatrics	8%
9		Nuclear Medicine	8%
10		Breast Imaging	8%
11		Anatomy and Technical	6%
12		US	5%
<b>Total</b>			<b>100%</b>

**Note:**

- Blueprint distributions of the examination may differ up to +/-5% in each category.
- Percentages and content are subject to change at any time. See the SCFHS website for the most up-to-date information.
- Research, Ethics, Professionalism and Patient Safety are incorporated within the various domains.

**Related Reference:**

[Assessment Conduct Regulations PDF](#)

**Suggested References:****Neuroradiology:**

- The Requisites, Publisher: Elsevier; 2016, Language: English, ISBN-10: 1455775681, ISBN-13: 978-1455775682
- Diagnostic Imaging: Brain, Publisher: Elsevier; 2015, Language: English, ISBN-10: 0323377548, ISBN-13: 978-0323377546
- Diagnostic Imaging: Spine, Publisher: Elsevier, 2015, ISBN-10: 032337705X, ISBN-13: 978-0323377058
- Neuroradiology: Key Differential Diagnoses and Clinical Questions, Publisher: Saunders, 2012, Language: English, ISBN-10: 1437717217, ISBN-13: 978-1437717211

**Case based books:**

- Radcases Neuro Imaging, Publisher: Thieme; ,Language: English, ISBN-10: 1604061898, ISBN-13: 978-1604061895.
- RadCases Head and Neck Imaging , Publisher: Thieme; , 2016, Language: English, ISBN-10: 1604061936, ISBN-13: 978-1604061932
- Neuroradiology Cases (Cases in Radiology), Publisher: Oxford University Press;, 2012, Language: English, ISBN-10: 0199735980, ISBN-13: 978-0199735983
- Case-based brain imaging, Publisher: Thieme, 2013, Language: English, ISBN-10: 978-1-60406-953-2, ISBN-13: 978-1-60406-954-9
- Top 3 Differentials in Neuroradiology, Publisher: Thieme, 2015, Language: English, ISBN-10: 1604067233. ISBN-13: 978-1604067231
- Neuroimaging: A Teaching File, Publisher: LWW, 2014, Language: English, ISBN-10: 1451173288, ISBN-13: 978-1451173284

**Body Imaging:**

- Webb, W. R., Brant, W. E., & Major, N. M. (2020). Fundamentals of body Ct. St. Louis: Elsevier.
- Federle, M. P., & Raman, S. P. (2015). Diagnostic imaging: gastrointestinal. Philadelphia: Elsevier.
- Tublin, M. E., Borhani, A. A., Furlan, A., & Heller, M. T. (2016). Diagnostic imaging: Genitourinary . Philadelphia, PA: Elsevier.

**Case based books:**

- OBrien, W. T. (2018). Top 3 differentials in radiology: a case review. New York: Thieme.
- Ros, P. R., Morteale, K. J., Pelsser, V., & Thomas, S. (2014). Ct and Mri of the abdomen and pelvis: a teaching file. Philadelphia: Wolters Kluwer Lippincott Williams & Wilkins Health.
- Hsu, W. C., & Cummings, F. P. (2016). Gastrointestinal imaging: a core review. Philadelphia: Wolters Kluwer.

**Nuclear:**

- Mettler, F. A., & Guiberteau, M. J. (2019). Essentials of nuclear medicine and molecular imaging. Philadelphia: Elsevier.
- Bennett, P. (2015). Diagnostic imaging: nuclear medicine. Amirsys.

**Case based books:**

- Donohoe, K. J., & D., V. den A. A. (2011). Case-based nuclear medicine. New York: Thieme.
- Appelbaum, D., Miliziano, J., Nayak, S., & Bradley, Y. (2011). Nuclear medicine. New York: Thieme.

**MSK:**

- Helms, C. A. (2014). Fundamentals of skeletal radiology. Philadelphia, PA: Elsevier Saunders.
- Helms, C. (2009). Musculoskeletal Mri. Philadelphia, PA: Sanders.

**Case based books:**

- Chew, F. S., Mulcahy, H., & Ha, A. S. (2012). Musculoskeletal imaging: a teaching file. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins Health.
- Anderson, M. W., & Smith, S. E. (2014). Musculoskeletal imaging cases. Oxford: Oxford University Press.

**Chest:**

- L., R. de C. M. (2012). Diagnostic imaging, chest. Salt Lake City, UT: Amirsys.
- Webb, W. R., & Higgins, C. B. (2011). Thoracic imaging pulmonary and cardiovascular radiology. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins Health.

**Case based books:**

- Ajlan, A. M., & Semionov, A. (2016). Thoracic imaging. New York: McGraw-Hill Education.
- Bhalla, S. (2012). Chest imaging cases. New York: Oxford University Press.

**Pediatrics:**

- Donnelly, L. F., & Donnelly, L. F. (2017). Fundamentals of pediatric imaging. Philadelphia, PA: Elsevier, Inc.
- Mellow, A. C. (2017). Diagnostic imaging: pediatrics. Philadelphia: Elsevier.

**Case based books:**

- Chung, E. (2012). Pediatric imaging cases. New York: Oxford University Press.
- Restrepo, C. S., & Zangan, S. M. (2011). Radcases:Thoracic imaging. New York: Thieme.

**Breast imaging:**

- Cardenosa, G. (2015). Clinical breast imaging: the essentials. Philadelphia: Wolters Kluwer.
- DOrsi, C. J., Mendelson, E. B., Ikeda, . (2013). ACRr breast imaging and reporting data system: breast imaging atlas. Reston, VA: American College of Radiology.

**Case based books:**

- Shah, B. A., & Mandava, S. (2018). Breast imaging: a core review. Philadelphia: Wolters Kluwer.

**Interventional:**

- Kandarpa, K., Machan, L., & Durham, J. (2016). Handbook of interventional radiologic procedures. Philadelphia: Wolters Kluwer.

**Casebased books:**

- Covey, A. M., Pua, B., Aguado, A., & Madoff, D. C. (2015). Interventional radiology cases. New York: Oxford University Press.

**General:**

- Lippincott, Williams & Wilkins. (2019). Brant and Helms Fundamentals of Diagnostic Radiology.
- Harisinghani, M. G., Chen, J. W., & Weissleder, R. (2019). Primer of diagnostic imaging. Philadelphia, PA: Elsevier.
- Practical Differential Diagnosis for CT and MRI, Publisher: Thieme, 2008, Language: English, ISBN-10: 1588906558, ISBN-13: 978-1588906557

**Case based books:**

- OBrien, W. T. (2018). Top 3 differentials in radiology: a case review. New York: Thieme.
- Pope, T. L. (2014). Aunt Minnie's atlas and imaging-specific diagnosis. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.

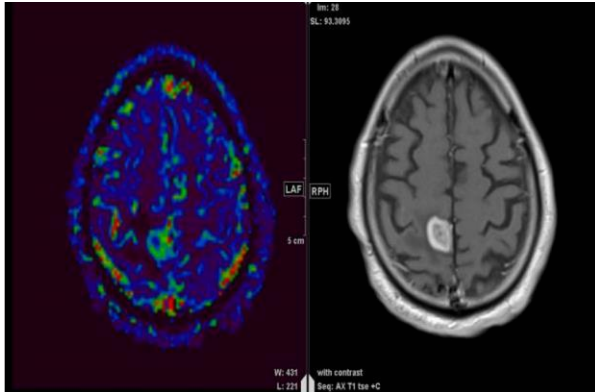
**Note:**

This list is intended for use as a study aid only. SCFHS does not intend the list to imply endorsement of these specific references, nor are the exam questions necessarily taken solely from these sources.

**Example Questions**

**EXAMPLE OF K2 QUESTIONS**

**Question 1**



List four important findings in a 45-year-old patient with epilepsy (see image)?

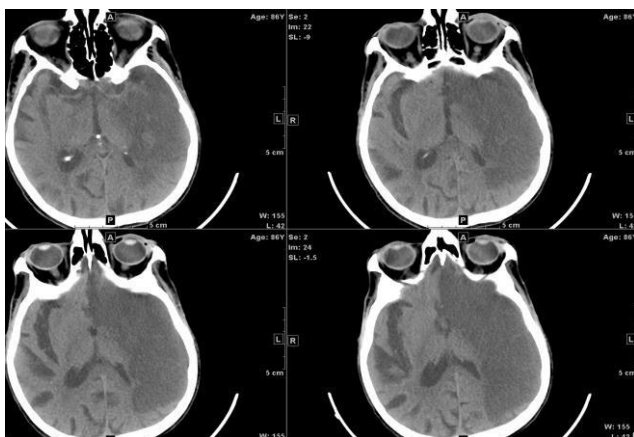
- 1).....
- 2).....
- 3).....
- 4).....

List two differential diagnosis?

- 1).....
- 2).....

**EXAMPLE OF K1 QUESTIONS**

**Question 2**



Which of the following is the main abnormality (see image)?

- A. There is mass at left cerebral hemisphere
- B. There is diffuse hypodensity at left MCA territory
- C. The primary lesion is diffuse hyperdensity at right insula
- D. There is mass lesion with infiltration of forceps major