

IAEA/ESNM Webinar Series on Paediatric NM

Paediatric lung scintigraphy

Self-assessment questions

Q1: Pulmonary blood flow disturbances in congenital heart defects are:

1. rare
2. frequent
3. limited to tetralogy of Fallot and related syndromes
4. most frequent after surgical treatment
5. none of the above

Answer: 2

Q2: The follow-up of congenital heart defects after surgical correction:

1. is limited to 5 years after intervention
2. is usually prolonged and requires integration of different imaging techniques
3. does not require imaging if the patient is asymptomatic
4. is based on clinical examination and echo-cardiography after complete correction of the anatomical defect
5. none of the above

Answer: 2

Q3: The tracer of choice for the lung perfusion scintigraphy in paediatric cardiology is:

1. ^{99m}Tc -DTPA aerosol
2. ^{133}Xe
3. ^{99m}Tc -MAA
4. ^{99m}Tc -microspheres
5. None of the above

Answer: 3

Q4: Particle number reduction is based on

1. body weight and anatomo-functional situation
2. body surface area and anatomo-functional situation
3. body weight and age
4. body weight and type of surgical correction

Answer: 1



Q5: Lung perfusion scintigraphy?

1. is contraindicated when Right-to-Left shunt is present
2. should not be performed if wheezing (broncho-constriction) is present
3. is contraindicated when pulmonary hypertension is present
4. none of the above

Answer: 2

Q6: Image acquisition

1. has to be performed in the standard six projections (Ant, Post, Right/Left anterior oblique, Right/Left posterior oblique)
2. should include SPET or SPET/CT whenever possible
3. requires at least Anterior and Posterior projection
4. can be limited to posterior projection
5. none of the above

Answer: 4

Q7: The site of injection

1. is usually irrelevant
1. is preferably performed in the upper limbs
2. should avoid the lower limbs
3. is irrelevant when the circulation is physiologic
4. none of the above

Answer: 4

Q8: Which of the following is true?

1. In Fontan circulation the injection site is limited to the upper limbs
2. In Fontan circulation it is required to inject the tracer (^{99m}Tc -MAA, split dose) in both arms.
3. In Fontan circulation it is required to inject the tracer (^{99m}Tc -MAA, split dose) in upper and lower limbs.
4. none of the above

Answer: 3

Q9: Which of the following is true?

1. The Grimon index (shunt index) is the ratio between lung counts and brain counts
2. The Grimon index (shunt index) requires two injections (upper limb and lower limb)
3. The Grimon index (shunt index) is the ratio between brain counts and lung counts
4. None of the above

Answer: 3



Q10: During angioplasty follow-up lung perfusion scintigraphy

1. should be performed between 3 and 6 months after the interventional procedure
2. should not be done before 9-12 months after the interventional procedure
3. should be performed not earlier than 6 months after the interventional procedure
4. none of the above

Answer: 3