

One year on: Test your knowledge from the previous year

1. Which of the following best represents the current 30-day mortality rate of late open surgical conversion following endovascular aortic aneurysm repair?¹
 - A. 20%
 - B. 35%
 - C. 50%
 - D. 75%
 - E. 10%

2. Which one of the following statements is true for patients with post-thrombotic syndrome?²
 - A. All patients with post-thrombotic syndrome should be treated with stent placement.
 - B. Stenting is the only effective strategy in relieving symptoms for patients with post-thrombotic syndrome.
 - C. In order to avoiding the pulmonary embolism, an inferior vena cava filter insertion is necessary before stent placement.
 - D. Patients with thrombosis in the femoral vein had a higher incidence of post-thrombotic syndrome.
 - E. Patients with iliofemoral thrombosis have a higher risk for development of post-thrombotic syndrome than do patients with femoral thrombosis.

3. How many segments is the inferior vena cava conventionally divided into when planning the resection of a leiomyosarcoma involving the renal veins?³
 - A. The IVC is conventionally divided into three segments
 - B. The IVC is conventionally divided into four segments
 - C. The IVC is conventionally divided into two segments
 - D. The IVC is conventionally divided into five segments
 - E. The IVC is considered as a whole.

4. Which of the following statements is true with regards to the SPIDER-graft for thoracoabdominal aortic repair?⁴
 - A. It is a new fenestrated endovascular graft for juxtarenal aortic repair
 - B. It is a new graft for open repair with extracorporeal circulation and Crawford access
 - C. It is a new hybrid graft that avoids the need for thoracotomy and extracorporeal circulation
 - D. Has demonstrated excellent outcomes in human studies
 - E. Cannot be used in patients with connective tissue disease

5. A recent meta-analysis comparing the outcomes of plain balloon angioplasty versus primary stenting in the treatment of failing AVGs showed:⁵
 - A. Technical success of plain balloon angioplasty was superior when compared to stenting.
 - B. Technical success of plain balloon angioplasty was equal when compared to stenting.
 - C. Primary patency at 6 months was equal after plain balloon angioplasty and stenting.
 - D. Technical success of plain balloon angioplasty was inferior when compared to stenting.
 - E. Secondary patency at 12 months was superior after plain balloon angioplasty when compared to stenting.

6. How many patients are needed to show non-inferiority to other stent graft devices with respect to cumulative endoleak rate in device registries (excluding type 2)?⁶
 - A. 100
 - B. 245
 - C. 525
 - D. 1095
 - E. 2773

7. The approximate reported rate of cranial nerve injuries in literature following redo-CEA is⁷

- A. 1%
- B. 2-4%
- C. 5-7%
- D. 7-10%
- E. 11-15%

8. Which of the following statements on sexual dysfunction after AAA repair is correct?⁸

- A. The literature regarding sexual dysfunction occurrence after AAA surgical repair is well documented, with robust and consistent findings.
- B. In men, sexual dysfunction after AAA surgical repair can potentially include erection and/or ejaculation disorders.
- C. Female sexual dysfunction after AAA surgical repair has been reported in several large prospective cohort studies.
- D. Current literature provides strong evidence of a protective effect of EVAR on sexual function compared to open repair.
- E. The risk of sexual dysfunction after AAA repair is low.

9. In what circumstances are the results for surgical intervention better than endovascular intervention for the treatment of nonmatured arteriovenous fistulae?⁹

- A. Arterial inflow stenosis
- B. Juxta-anastomotic stenosis
- C. Venous outflow stenosis
- D. Central vein stenosis
- E. Accessory vein obliteration/ligation

10. Which of the following statements is not true for intact AAA surgery in high volume hospitals in Germany?¹⁰

- A. They use EVAR more often than low volume hospitals.
- B. Overall in-hospital mortality is lower compared to low volume hospitals.
- C. The rates of myocardial infarction and stroke after AAA surgery are the same as in low volume hospitals.
- D. The use of blood products is lower compared to low volume hospitals.
- E. The treated patients are older when compared to low volume hospitals.

11. Which of the following statements about radiation safety is correct?¹¹

- A. Lead glasses were considered to be the most important type of personal protective equipment.
- B. Team members should only increase their distance from the radiation source when performing DSA runs.
- C. Vascular surgeons valued the use of radioprotective drapes higher than interventional cardiologists and radiologists.
- D. Experts disagreed that justification and informed consent are relevant practices in radiation protection.
- E. Radiation protection training should cover radiation risks for both patients and staff in a realistic and pragmatic way.

12. An abdominal aortic aneurysm can be defined as an abdominal aortic diameter of 3.0 cm or more. Utilizing which ONE of the following measurement approaches in a screening program for abdominal aortic aneurysms will likely detect the fewest number of aneurysms?¹²

- A. Maximal antero-posterior abdominal aortic diameter assessed by ultrasound imaging measured from the outer anterior wall to the outer posterior wall (OTO)
- B. Maximal antero-posterior abdominal aortic diameter assessed by T2 weighted magnetic resonance imaging (with multiplanar reconstructions) measured from the outer anterior wall to the outer posterior wall (OTO)
- C. Maximal antero-posterior abdominal aortic diameter assessed by ultrasound imaging measured from the outer anterior wall to the inner posterior wall (LTL)
- D. Maximal antero-posterior abdominal aortic diameter assessed by ultrasound imaging measured from the inner anterior wall to the inner posterior wall (ITI)
- E. Maximal antero-posterior abdominal aortic diameter assessed by computed tomography angiography (with multiplanar reconstructions) measured from the outer anterior wall to the outer posterior wall (OTO)

References

- 1 Kansal V, Nagpal S, Jetty P. Editor's Choice – Late Open Surgical Conversion after Endovascular Abdominal Aortic Aneurysm Repair. *Eur J Vasc Endovasc Surg* 2018;**55**:163–9.
- 2 Ye K, Shi H, Yin M, Qin J, Yang X, Liu X, et al. Treatment of Femoral Vein Obstruction Concomitant with Iliofemoral Stenting in Patients with Severe Post-thrombotic Syndrome. *Eur J Vasc Endovasc Surg* 2018;**55**:222–8.
- 3 Liu D, Ren H, Liu B, Shao J, Chen Y, Song X, et al. Renal Function Preservation in Surgical Resection of Primary Inferior Vena Cava Leiomyosarcoma Involving the Renal Veins. *Eur J Vasc Endovasc Surg* 2018;**55**:229–39.
- 4 Debus ES, Kölbel T, Duprée A, Daum G, Sandhu HK, Manzoni D, et al. Feasibility Study of a Novel Thoraco-abdominal Aortic Hybrid Device (SPIDER-graft) in a Translational Pig Model. *Eur J Vasc Endovasc Surg* 2018;**55**:196–205.
- 5 Kouvelos GN, Spanos K, Antoniou GA, Vassilopoulos I, Karathanos C, Matsagkas MI, et al. Balloon Angioplasty Versus Stenting for the Treatment of Failing Arteriovenous Grafts: A Meta-Analysis. *Eur J Vasc Endovasc Surg* 2018;**55**:249–56.
- 6 Kent F, Ambler GK, Bosanquet DC, Twine CP, Bell R, Bicknell CD, et al. The Safety of Device Registries for Endovascular Abdominal Aortic Aneurysm Repair: Systematic Review and Meta-regression. *Eur J Vasc Endovasc Surg* 2018;**55**:177–83.
- 7 Dorigo W, Fargion A, Giacomelli E, Pulli R, Masciello F, Speziali S, et al. A Propensity Matched Comparison for Open and Endovascular Treatment of Post-carotid Endarterectomy Restenosis. *Eur J Vasc Endovasc Surg* 2018;**55**:153–61.
- 8 Regnier P, Lareyre F, Hassen-Khodja R, Durand M, Touma J, Raffort J. Sexual Dysfunction After Abdominal Aortic Aneurysm Surgical Repair: Current Knowledge and Future Directions. *Eur J Vasc Endovasc Surg* 2018;**55**:267–80.
- 9 Tordoir JHM, Zonnebeld N, van Loon MM, Gallieni M, Hollenbeck M. Surgical and Endovascular Intervention for Dialysis Access Maturation Failure During and After Arteriovenous Fistula Surgery: Review of the Evidence. *Eur J Vasc Endovasc Surg* 2018;**55**:240–48.
- 10 Trenner M, Kuehnl A, Salvermoser M, Reutersberg B, Geisbuesch S, Schmid V, et al. Editor's Choice – High Annual Hospital Volume is Associated with Decreased in Hospital Mortality and Complication Rates Following Treatment of Abdominal Aortic Aneurysms: Secondary Data Analysis of the Nationwide German DRG Statistics from 2005 to 2013. *Eur J Vasc Endovasc Surg* 2018;**55**:185–94.
- 11 Doyen B, Maurel B, Cole J, Maertens H, Mastracci T, Van Herzele I, et al. Defining the Key Competencies in Radiation Protection for Endovascular Procedures: A Multispecialty Delphi Consensus Study. *Eur J Vasc Endovasc Surg* 2018;**55**:281–87.
- 12 Borgbjerg J, Bøgsted M, Lindholt JS, Behr-Rasmussen C, Hørlyck A, Frøkjær JB. Superior Reproducibility of the Leading to Leading Edge and Inner to Inner Edge Methods in the Ultrasound Assessment of Maximum Abdominal Aortic Diameter. *Eur J Vasc Endovasc Surg* 2018;**55**:206–13.

Answers from the previous issue (January 2019)

1E, 2E, 3B, 4A, 5A, 6A, 7C.