

Self-Assessment Examination

See answer key on next page

- 1. All of the following are postulated to be beneficial actions of cicletanine in PAH except:**
 - a. Natriuresis
 - b. Increased nitric oxide synthesis
 - c. Endothelin-A receptor cleavage
 - d. Phosphodiesterase-5 inhibition
 - e. Smooth muscle hyperpolarization and calcium channel inhibition

- 2. Tyrosine kinase inhibitors like sorafenib or imatinib are most likely to be useful as treatment for PAH by blocking:**
 - a. Vascular smooth muscle apoptosis
 - b. Platelet degranulation
 - c. Monocyte chemotaxis
 - d. Endothelial cell proliferation
 - e. Smooth muscle contraction (vasoconstriction)

- 3. In current clinical trials, endothelial progenitor cell therapy:**
 - a. Requires chronic immunosuppression with mycophenolate (Cell Cept)
 - b. Reintroduces autologous cells after in vitro expansion of a select mononuclear cell population
 - c. Offers the possibility of overexpressing specific genes in the pulmonary circulation
 - d. A and B
 - e. B and C

- 4. The PACES study adding sildenafil to epoprostenol:**
 - a. Required patients to be on at least 30 ng/kg/min epoprostenol for 2 months prior to enrollment
 - b. Allowed up to 4 epoprostenol dose increments during the placebo-blinded phase
 - c. Measured a 41 m improvement in placebo-corrected 6MW distance for sildenafil-treated patients
 - d. Measured a benefit of sildenafil on time to clinical worsening
 - e. Was terminated early because sildenafil produced an unanticipated improvement in functional class for 40% of sildenafil-treated patients

- 5. With regard to the 6MW test as an endpoint in PAH, which of the following is most correct?**
 - a. The placebo-corrected improvement in 6MW distance has been a primary endpoint in most of the pivotal registration trials for approved PAH drugs
 - b. There may be a “ceiling effect” with a reduced sensitivity to measure improvements in the 6MW test for patients with better baseline exercise capacity
 - c. One key advantage of the 6MW is that investigators have shown that 30 m improvements in 6MW are clinically significant and substantially greater than day-to-day variation
 - d. A and B
 - e. B and C

- 6. With regard to the design of clinical research, an event-driven clinical trial:**
 - a. Was used to study the addition of inhaled treprostinil to bosentan or sildenafil
 - b. Requires a longer duration placebo blinded phase, especially if patients in the placebo arm have few events per unit time
 - c. Is probably unethical because the 4th WHO meeting in Dana Point created consensus about the utility of 6MW distance as the best primary endpoint
 - d. Will never be adopted in PAH because it requires too many patients

- 7. Which of the following statements about epoprostenol is most correct?**
 - a. The pivotal registration trial was double blind
 - b. Epoprostenol is FDA-approved for patients in functional class II-IV
 - c. The drug requires daily mixing and the infusion must be chilled with ice packs or changed frequently
 - d. B and C
 - e. None of the above

- 8. In the placebo-controlled trials for oral beraprost:**
 - a. The placebo-corrected improvement in 6MW distance was improved in the North American and European trials at 3 months
 - b. The improvement in placebo-corrected 6MW test was the primary endpoint for both the European and North American studies
 - c. Each trial enrolled more than 200 patients
 - d. The European trial dosed patients 6 times daily because of the short beraprost half-life
 - e. The drug was well tolerated with modest side effects that did not limit the dose achieved

- 9. With regard to the pharmacokinetic data for beraprost and UT-15C (oral treprostinil diethanolamine), which of the following is most correct?**
 - a. Peak beraprost levels occur 2 hours after a dose, provided that a 500-calorie meal is ingested with the drug
 - b. UT-15C produced near maximum treprostinil levels in most patients 30 minutes after the drug was dosed
 - c. Many patients taking UT-15C have achieved sustained serum treprostinil levels similar to patients on 60 ng/kg/min of parenteral treprostinil
 - d. At higher doses (3-4 mg BID), UT-15C patients have clinically relevant serum treprostinil levels for ~6 hours during the 12 hours following a dose
 - e. The smaller UT-15C tablet strengths (0.25 mg, 0.5 mg) have a shorter half-life than the original 1 mg tablet strength

