### Post Test Sample Questions

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| A 73 year-old male has a 5 cm. sessile bladder tumor and several satellite lesions (< 1 cm.). Staging imaging studies show no evidence of metastatic disease. TURBT shows multi-focal T1, high-grade bladder cancer with micropapillary features. A prostatic urethral biopsy shows carcinoma in situ involving prostatic ducts without stromal invasion. Repeat TURBT shows residual T1HG bladder cancer. He is an active 50 pack-year smoker with history of COPD and cardiac bypass for myocardial infarction 6mo ago. Which of the following factors would not favor cystectomy over BCG as the best management? | A. Micropapillary histology  
B. Age > 73 years  
C. Prostatic urethral CIS  
D. Residual T1 bladder cancer on repeat TURBT | Answer: B. Patients with micropapillary histology have a high risk of progression with BCG and a high probability of extravesical disease. They are best managed with immediate cystectomy. There is insufficient evidence that BCG provides adequate control of prostatic urethral CIS compared to CIS within the bladder. Patients with residual T1 bladder cancer are at a significantly increased risk of BCG progression and should be considered for immediate cystectomy. As life expectancy decreases, the risks of cystectomy increase and the probability of disease progression on BCG decreases. As patients age, they should be considered more strongly for bladder preservation with BCG. |
| The following are components of Lean Management strategy except:                                                                                                                                                                                                                                                                                                                                                                                                                       | A. Develop a standard process  
B. Leaders act as mentors, facilitators, educators  
C. Ideas for change originate from those on the front-line who know the processes and constraints  
D. Economies of scale | Answer: D. Lean management aims to create a culture of continuous improvement aligning organizational goals with operational activities and those directly involved in those activities take leadership in organized problem-solving. Leaders act as mentors, facilitators and educators with emphasis on responsibility, not authority. |
| A 14 year old boy with a diagnosis of Ehlers-Danlos Syndrome is referred for a physical therapy evaluation by his primary physician. What do you expect would be typical muscular findings on exam?                                                                                                                                                                                                                                         | A. Increased muscle tightness in hamstrings and gastrocs  
B. Poor scapular stability and decreased shoulder girdle strength  
C. Decreased abdominal strength and endurance  
D. All of the above | Answer: D. Children with EDS commonly have all of the above impairments due to poor muscle co-activation and joint instability |
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| What is a clinical presentation of fetal heart failure? | A. Increased central venous pressure.  
B. Pleural effusions  
C. Pericardial effusion  
D. Placental edema  
E. All of the above | E. All of the above |
| Advantages of fetal cardiac MRI include: | A. MRI offers better estimates of chamber volume than standard echocardiography.  
B. MRI is not limited by acoustic windows  
C. MRI is not limited by oligohydramnios and maternal obesity  
D. Less operator dependence of actual image acquisition than with echocardiography.  
E. All of the above | E. All of the above |
| The continuity between the mitral and aortic valves and the absence of sub-aortic conus can be established best from which of the following views: | A. 3 vessel view  
B. **Cardiac long axis view**  
C. Ductal view  
D. Caval long axis view | B. **Cardiac long axis view** |
| Fetal bradycardia is diagnosed when the fetal heart rate is: | A. Less than 50  
B. Less than 70  
C. **Less than 100**  
D. Less than 120 | C. **Less than 100** |

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Clinical fetal heart failure occurs in conditions associated with increasing left and right atrial filling and/or central venous pressures to manifest as right heart failure with the development of pericardial and pleural effusions, ascites, and peripheral and placental edema. It may occur in primary myocardial disease, in presence of the extracardiac pathology impacting the loading conditions of the heart, and in conditions associated with secondary myocardial dysfunction including structural heart defects, bradycardia or tachycardia.

Compared to echocardiography, MRI offers advantages in diagnosing congenital heart disease. MRI offers better estimates of chamber volume. Volume measurements made using two-dimensional echocardiography are often inaccurate due to the estimates made with assumptions of chamber shape. MRI is not limited by acoustic window. Additionally, factors such as oligohydramnios and maternal obesity don’t affect fetal MRI studies. Operator dependence of actual image acquisition is an issue with fetal echocardiography but not for fetal MRI.

The long-axis view is aligned with the left ventricular outflow tract. The continuity between the mitral and aortic valves and the absence of sub-aortic conus is best seen from this view.

Fetal bradycardia is diagnosed when the fetal ventricular heart rate is slower than 100 bpm, mainly due to AV block. Approximately half of all cases are caused by associated congenital heart disease, and remaining cases that have normal cardiac structure are often caused by maternal SS-A antibody.