Biomedical Imaging

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1. What structures do you recognize in this radiograph?

2. What structures are more clearly visible after image processing?

3. This patient presented with left chest pain and shortness of breath. Describe any visible features which might explain his symptoms.

4. Which is denser, barium or bone? How can you tell?

5. Describe any features of the colon that might be abnormal.

6. How do the arteries in this image compare those in the Radiograph-chest?

7. Does false color help you to see any of the structures in the image better? Why or why not?

8. Why does the hip prosthesis appear so bright?

9. What might the dark areas in the lower abdomen be and why do they appear darker than other areas?

10. Did any of the image processing techniques help you to see the structures better? If so, how?

11. How does the soft tissue detail in Head MRI compare to Head CT?

12. From what perspective (plane of section) are you viewing these images?

13. Choose a pixel representing an area of high blood concentration (dark) and write down the X and Y coordinates and the Value of the pixel as shown in the Info window.

14. What is the value of the same pixel you measured above in a different false color?

15. How does false color help you to evaluate the differences in blood flow in this PET image?

16. Which of these bone scan images appear abnormal? Why?

17. If an area appears dark when it should be light, what kind of condition might be present? Why?

18. As you move through the echocardiogram, what happens to the chambers of the heart?

19. What is an advantage of the echocardiogram over the other imaging techniques?

20. After working with images and processing them with this image processing software program, what advantage do you see in using image processing to study living things?