# Imaging **QUIZ**

*The answers will be available on SORSA's website* **www.sorsa.org.za**, *in January 2017.*

## Case 1

A 60 year old asymptomatic male presented for screening CT colonography. In the three images presented what has happened between Figure 1(a,b) and Figure 2?

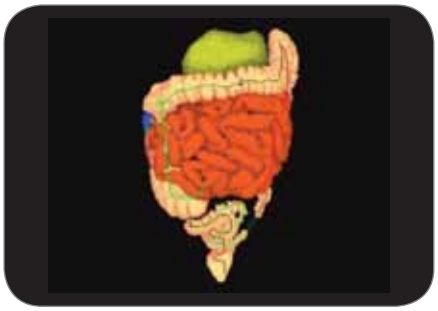

Figure 1(a). Colon-map

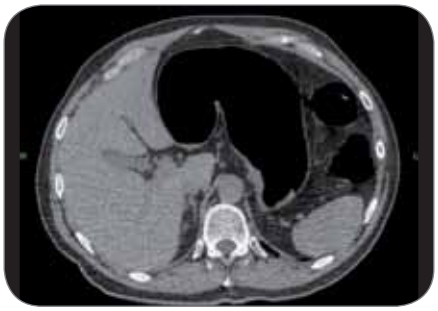

Figure 1(b). 2D axial view

Figure 2. Colon-map

## Case 2

A 59 year old female who is asymptomatic presented for a screening CT colonography. The CTC was normal.

a) What extracolonic abnormality was detected?

b) What E-classification will it be if...

- E1 = not of clinical importance,
- E2= low clinical importance, thus no immediate impact on patient management,
- E3 = moderate importance,
- E4 = significant importance and must be reported to the referring physician.

c) What imaging examination/s would confirm the finding?

**Case 3**

A 70yr old male on dialysis presents with a positive Cologuard test*. He was referred for a CTC study. The CTC was negative for cancer. A CTC study includes extracolonic structures visualised on 2D.

a) What are your findings of the 2D axial view?

b) What is your E-classification?

c) What is the reason for your E-classification?

**Cologuard is a non-invasive screening option that detects early colon cancers based on stool DNA. Cologuard may produce false positive or false negative results. For example, an estimated 76% false positive results if diminutive polyps are included. It has limited sensitivity for advanced adenomas (less than 50%) whereas CTC has a sensitivity for over 90% for large polyps. CTC is much more effective than the stool test. Put differently, Cologuard may successfully detect up to 92% of colo-rectal cancer, but its sensitivity for large advanced adenomas is only 42%, falling well short in this critical area of cancer prevention.[1] In a typical average risk screening population, 1 in 20 individuals will harbor a large adenoma, whereas only 1 in 500 will have an invasive cancer. To put Cologuard in perspective, for a screening population of 10,000 adults, Cologuard would on average detect 18 cancers, miss 2 cancers and generate 1,300 false-positive results (i.e. no cancer).[2]*

1. Imperiale TF, Ransohoff DF, Itzkowitz SH, et al. Multitarget stool DNA testing for colorectal- cancer screening. N Engl J Med 2014; 370 [14]: 1287-9
2. Yee J, Chair: Colon Cancer Committee, ACR letter to Medicare. Re. Proposed decision memo for screening for Colorectal cancer-Stool DNA Testing [CAG- 0044N], August 27, 2014.

**Case 4**

A 12 year old female presents to the x-ray department with a history of trauma to the right calcaneal area. Considering Figure 4, do you detect any abnormality?

Give reasons for your answer.


Figure 4. Right lateral projection of the ankle.

**Case 5**

The patient presents with non-specific pain in the region of the elbow.
Considering Figure 5 on the following page, can any abnormality be detected? Give reasons for your answer.

Can you determine the possible age of this patient? Give reasons for your answer.

*... continued on page 24*

Figure 5. Right AP and lateral projections of the elbow.

**Case 6**

The patient presented to the accident and emergency department after falling earlier that day. Clinically the arm was swollen, and warm to touch.

Figure 6 represents the resultant radiographs obtained.

Can you detect any abnormality? Give reasons for your answer.

Figure 6. Right lateral projection of the elbow.

**Case 7**

An adult male presented to the radiography department after he tripped and fell on his hand. Refer to Figure 7 on the right, can you determine the abnormality present?

Give reasons for your answer.

Figure 6. Right lateral projection of the elbow.

**Case 8**

An 8 year old male patient, with a history of trauma to the distal radius and ulna presents to the trauma radiography unit. You are requested by the attending medical practitioner to perform a radiographic examination of the right forearm.

Figure 8 represents the resultant radiographic images obtained, what is the probable diagnosis? Give reasons for your answer.


Figure 8. Right AP and lateral projection of the forearm.