65 year-old female
Pre-operatory assessment for knee surgery

Dr. Felix Keng
Female 65 year-old
161 cm
58 Kg
Bra size 34B
History of: Chronic Obstructive Pulmonary Disease
CAD risk: hypertension
Pre-op assessment for knee surgery
Study: Dobutamine / Thallium
Baseline ECG
• Baseline ECG Interpretation
  A) Normal
  B) Tall R in V1
  C) ST depression
  D) B+C
Baseline ECG Interpretation

A) Normal
B) Tall R in V1
C) ST depression
D) B+C
• “Stress” ECG interpretation

A) Normal
B) Ischemic
C) Inconclusive
“Stress” ECG interpretation

A) Normal
B) Ischemic
C) Inconclusive

Comments:
Abnormalities existed in basal ECG which do not change significantly with stress. Thus, this is not either a normal nor an ischemic stress ECG.
What’s abnormal?

A) Anterior, septal & inferior infarct
B) Lateral wall hypertrophy
C) Motion artifact
D) Breast attenuation
• What’s abnormal?

A) Anterior, septal & inferior infarct

**B) Lateral wall hypertrophy**

C) Motion artefact

D) Breast attenuation

**Comments:**

There is increased lateral wall thickness due to hypertrophy, well seen on “raw” images (right). Uptake of the other myocardial walls seems to be decreased.
Teaching points:

• Larger structures on a SPECT image seem to have higher uptake due to partial volume effect.

• On the same image, thinner structures may look like “defects” when in fact no abnormality is present.

• The scan is difficult to interpret; “raw” images are an important aid to reach a conclusion.

• Myocardial perfusion imaging, like in this case, is indicated to assess surgical cardiac risk in patients with an abnormal basal ECG needing non-cardiac surgery.