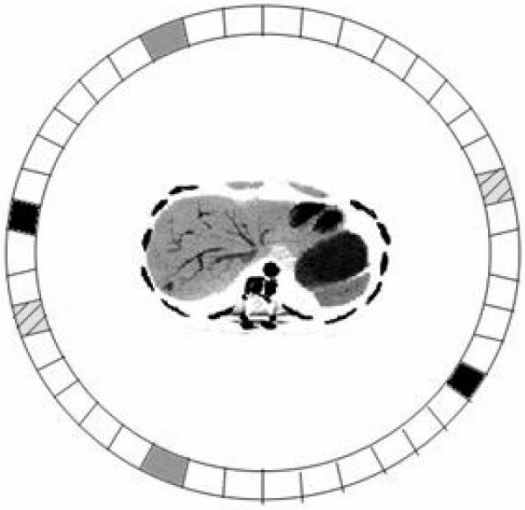
PET

1) A cross section of a PET scanner is shown below. The detectors shaded in show gamma rays which were detected at the same time.

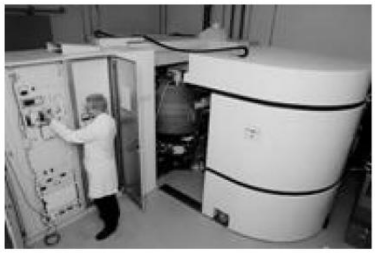


By drawing lines between the pairs of detectors that detected gamma rays, can you draw where you think the tumour is?

2) What does PET stand for?
3) What type of radiation do the isotopes used in PET scans emit?
4) What happens when this particle meets an electron?
5) What is then produced?
6) What is the name of the machine used to produce the isotopes?
7) Which of the following isotopes are used in PET scans (circle the correct answers)

Carbon-10	Oxygen-15	Fluorine-16
Carbon-11	Oxygen-16	Fluorine-17
Carbon-12	Oxygen-17	Fluorine-18

8) Which of these is a PET scanner?



9) What are PET scans often used to detect?

Reference: www.teachingmedicalphysics.org.uk