

BIOMEDICAL ENGINEERING

PROJECT:PET SCANNER

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1 Introduction

1.1 What is PET SCANNER?

PET stands for positron emission tomography and the device used for PET is PET Scan it is both a medical and research tool used in pre-clinical and clinical settings

1.2 How does it function?

A specially constructed device can show the path and distribution of a weakly radioactive substance. This substance is called tracer. The tracer dissolves in the blood stream, which will carry it in the brain. There it concentrates around brain structures that are particularly active. A PET SCAN detects the radioactivity then converts it into a digital image of the brain, highlighting the active areas.

1.3 What are the uses of a PET SCAN?

The following uses are listed as follows - :It highlights the active areas of the brain by use of scanning . :It can be helpful in detecting tumors . :A PET SCAN DETECTS the radioactivity and converts it into a digital image of the brain. :It can double the diagnostic clarity :It is a relatively painless procedure that measures both anatomy and metabolic functions within the patient's body as images are clicked on a single scan. . :It is also easy and non disruptive :It is also less time consuming .

1.4 What are the disadvantages of a PET SCAN?

The following demerits of a PET scanner is - :Slow growing, less active tumors may not absorb much tracer . :SMALL tumors may not be detectable . :High levels of blood sugar may cause the cells to absorb this normal sugar rather than this radioactive injected kind.

1.5 conclusion

So we see that PET Scanners have a vast application in the medical field .Hence if we work on the cons which are for a diabetic patients and a sugar patient it might not yield positive impacts so if the upcoming bio medical engineers innovate to improve the functioning for eliminating the demerits than it might prove to be a boon for patients.