

Timothy Lindis

April 9, 2013

BME 181

Liu Ming

Computed Tomography

Computed tomography is a method of examining organs by scanning them with x-rays to make a three dimensional picture to be viewed on a computer. A British Engineer named Godfrey Hounsfield with the help of Allan Cormack invented the CT scan in 1972. Hounsfield was awarded great honors for his invention, which included a Nobel Prize and being knighted by the Queen of Britain. The first model of the CT scan was only able to take scans of the head. The person would be sat down in a chair and their head would be placed in the machine. The machine would be turned on and x-rays would begin circling the head. It takes several hours to acquire the data and 2 days to develop the image. In 1974 the first machines were put into use. By 1976 full body scans had been made and put into hospitals. They became widely available in 1980. Now there are about 30,000 machines that have been put into use worldwide. CT scans now days are much faster and more complex. The patient lies down on the table and they are put through the machine or “donut”. The machine then proceeds to envelop the body part with x-rays and sends the data back to the computer where it processes the image. These machines now days only take 5-10 minutes to give you the image. These images are three-dimensional and you can rotate, zoom in, zoom out and do many other things with

the image. The typically scanned body parts include brain, heart and blood vessels, head and face including sinuses, chest, stomach, pelvic area, spine, bones and joints. Some of the things that doctors typically look for in these images include cancers, tumors, abnormalities, problems with organs, and brain damage.