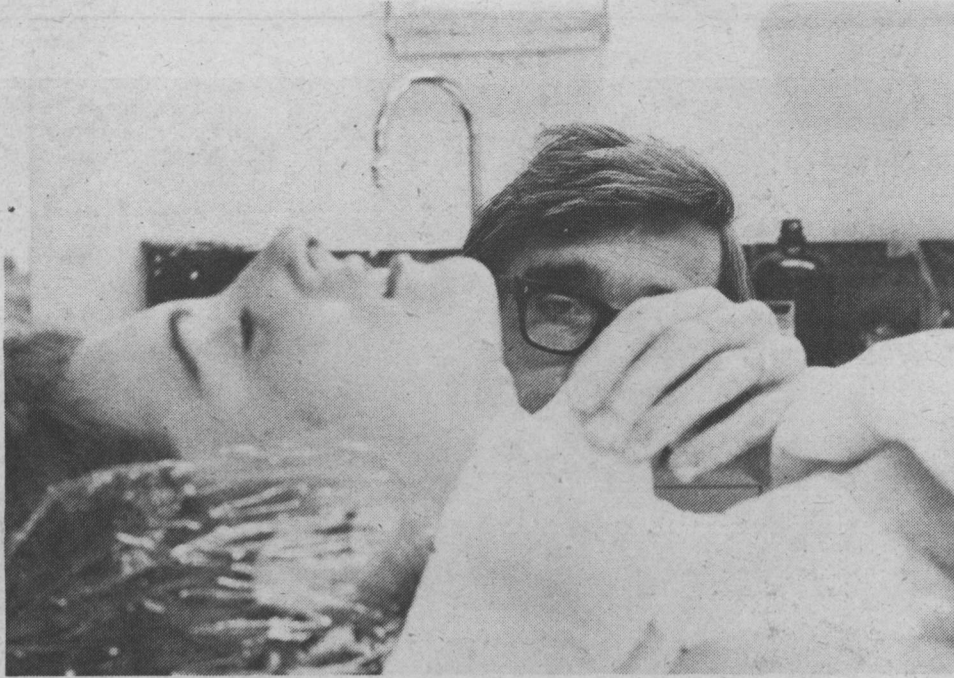
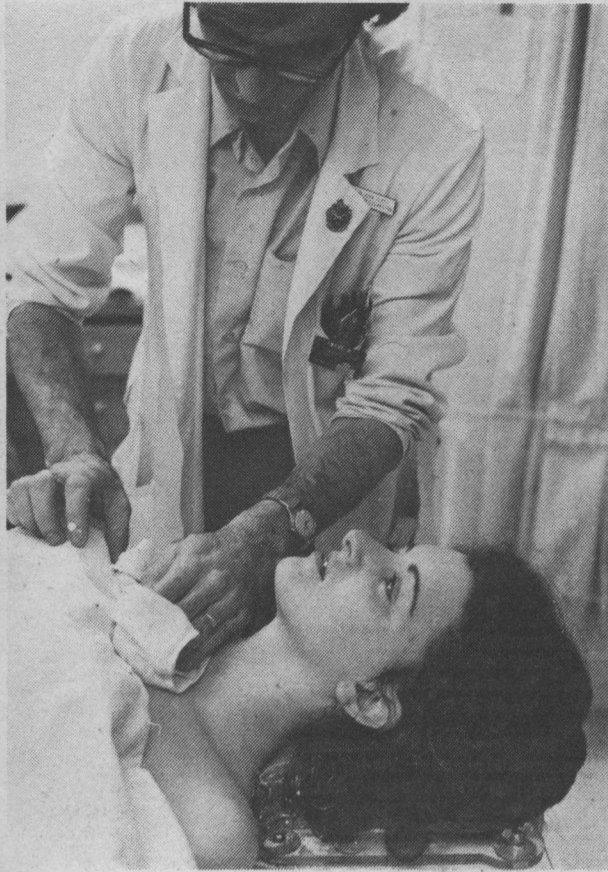


THE CAST



The first stage of preparation for radiotherapy after the initial diagnosis and testing, is the construction of a plastic cast which will help ensure the patient is positioned correctly and consistently during the radiation treatments.

The mould room, where the casts are made, looks more like an artist's studio than a hospital room. Plaster body casts are scattered around the room like so many shedded snake skins. The patient lies on the table (see photo at left) and technician John

Isitt smears her body with olive oil and places Saran Wrap over her hair to prevent the cast from sticking, making its removal far less painful. Comments Isitt: "Women have it easy at this stage. A man with a lot of hair can have quite a time of it."

Isitt moistens pre-cut gauze bandages impregnated with plaster and lays them across the patient's body (above). Casts can be made for nearly any part of the body, but here the patient is getting a head-and-neck cast, used in treating larynx cancer, for

example. Each strip is quickly removed before it hardens. A cast conforms to the body as closely as possible.

It's enough to make an Egyptian mummy. The technician is applying the plaster to the patient's head.

After a second cast, used in treating larynx cancer, for

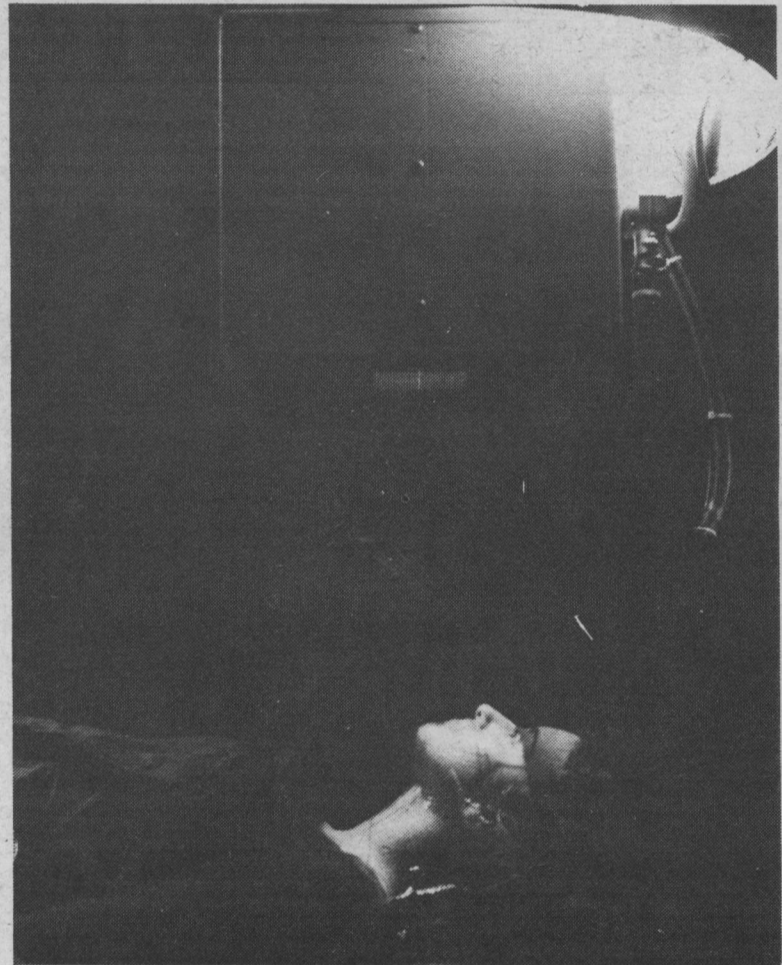
SIMULATION



The next preparatory step is a simulation of an actual treatment. The control panel of the simulator, shown above, is operated by technician Lucille Ferleyko. The simulator uses a much smaller radiation dose than the treatment units; however, the technicians are still shielded from background radiation by a lead screen.

The patient is placed on the simulation table under her cast, which is attached to a neck support. The technician takes a number of x-rays of the tumor which will be used later to plan treatment procedures.

The cast is illuminated from above and a technician draws guide marks to assist in positioning and treatment (see photos at right).



The technician is adjusting the patient's position on the simulation table.

RADIOTHERAPY



After these preliminary steps, the patient is ready for radiotherapy treatment. Technicians (at right) ensure she is positioned correctly so the radiation reaches the correct area. A laser beam (see photo at right) also assists in the arrangement.

The one-year-old \$250,000 linear accelerator is operated from an adjacent room by a technician (see photo at far right). The technician moves the gantry of the accelerator (the machine on the right of the photo at right) to a predetermined angle. The gantry contains the electron-accelerating device which produces the x-rays. A lead screen opposite the gantry prevents radiation from seeping into surrounding areas.

Each treatment takes one or two minutes. The patient is observed closely on a television monitor. Communication may be maintained with the patient through a speaker outside the room.