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Cesare Gianturco, MD (1905-1995) and the Roentgen Ray Motion Picture



Cesare Gianturco, MD

As a Fellow at Mayo Clinic in 1932, Dr Gianturco shared results of his early research in an article published in the *Proceedings of the Staff Meetings of the Mayo Clinic* that was coauthored with Dr W. C. Alvarez,¹ which revealed the mysteries of the stomach.

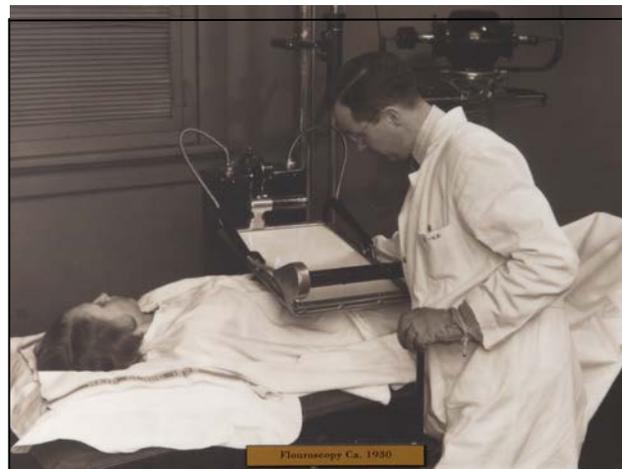
After acknowledging the efforts of other researchers around the world, Drs Alvarez and Gianturco explained the benefits of their process over those of the others. One example consisted of a series of traces that were really just “animated drawings.” They noted, “Although such a film gives an interesting composite picture of one type of peristalsis, it is of no value to the physicist who must have actual records ...made in such a way that he can measure and analyze movements.”¹

The physicians placed markers in the stomachs of cats and took a series of images in rapid succession. First results were challenged because the research animals were anesthetized and abdomens left open, so they and others were unsure if the anesthesia and

surgical conditions altered the function of the stomach. Later Dr Gianturco sewed silver beads inside the stomach to address this problem. Post mortem examinations of the research animals showed no changes to the condition of the stomach,¹ which verified the outcome of their process and results.

They took 88 images in a 22-second period and then took 4 smaller pictures of each of the larger ones, providing a 16-image per second final viewing product. Eastman Kodak Company provided the film.¹

Dr Gianturco, who received his masters degree in Radiology from Mayo Clinic in 1933, was noted as the founding father of interventional radiology (as opposed to diagnostic radiology) and was an avid inventor, holding 10 American patents at the time of his death in 1995.²



References

1. Gianturco C, Alvarez WC. Roentgen ray motion picture of the stomach. *Proc Staff Meet Mayo Clin.* 1932;47(7):669-671.
2. Cesare Gianturco, 90, Radiologist and Inventor. Van Gelder L. *The New York Times.* August 29, 1995.