

1st. That radium can, by a special action which is called "Selective Action," influence favorably certain pathological tissues without burning them.

2nd. That radium can be used to act deeply on subcutaneous diseases and also on certain distant tumors, some of these even thought at first inaccessible.

3rd. That radium can be used for treating somewhat larger surfaces, and even can claim some action on the general system.

In conclusion, that radium in so doing shows itself as a useful weapon against several diseases, especially against cancer, and often helps surgery and X-rays by completing and prolonging their effects.

I wish first to dwell on: the *Selective Action of Radium*, as this action is most important and often overlooked. In fact, what raises radium to a higher level than the ordinary caustic is that even when a burn is produced, it can act in a selective manner far beyond the portion burnt, as a very subtle modifying agent, leading certain pathological cells to degeneration without injuring the surrounding ones. Furthermore, thanks to certain conditions of technic, the burning can be avoided, and the selective curative action alone employed.

This once said, we must bear in mind that this selective action cannot be produced in all kinds of pathological tissues, but especially on malignant tumors, such as epithelioma, sarcoma, lymphadenoma, mycosis fungoides, on enlarged tuberculous glands, on angiomatous and keloid tissues, on eczemas, and on the nerves to produce analgesia.

There follows an histological study made with Doctors Degrais and Gaud which will not only show the selective power of radium on cancer cells, but also at what depth in certain cases of cancer this selective quality may act upon the cells.

You see on this slide the breast of a patient. On the right there is an enormous cancerous infiltration. On palpation this breast presented a hard and somewhat homogeneous mass, which measured  $6\frac{1}{4}$  inches transversely. In a single part which I here show you I gathered and placed 19 centigrammes of pure sulphate of radium, that is to say, 190 milligrammes, contained in four flat varnished apparatus superposed, the first one applied naked without any screen on the skin. These 19 centigrammes were left in place for 48 consecutive hours.

A charged electroscope which was presented on the opposite side of the breast was discharged in 8 to 9 seconds, and in like manner a screen of platino-cyanide of barium was illuminated.