

introducing tubes, he makes use in general only of combined filters of glass, aluminum and celluloid of thickness inferior, on the whole, to lead filters from 1-10 to 3-10 millimetres, the frequent use of which we recommend, and which themselves do not permit the use of very penetrating ray-action, such as is described by M. Dominici.

It is also the care in concentrating a greater number of rays acting at a depth, and the search for that quantitative value of ray-action which has led us to oppose apparatus, to increase the number of points of attack in order to end at the crossing of the rays—at the “cross-fire,” according to our own expression—and in this way to saturate the tumor with rays in a homogeneous way, with less risk of exciting cellular disturbances later on. But if radium therapy, through the progress of its technique and the increase of radio-active power possible of use, depends on the increase of the limits of its action as to depth, it lies with surgery to make the best use of this progress. Thanks to surgery, one can lessen the thickness of the tissues which the rays have to cross laterally by making in the tumor, in order to introduce the apparatus, perforations deep, simple, double, or even multiplied for the application of the cross-fire; by making large incisions, or by partially removing the tumor, and the results obtained will be satisfactory in proportion to the perfection with which these methods have been used.

On the other hand, if the neoplasm to be reached is difficult of access, since the apparatus is small and can take any shape desired, surgery can, after having made way for it either by making artificial openings in creating passages or by making use of natural openings, bring it, even at great depth, into actual contact with the neoplasm. And here again the results will depend on the accuracy of the application, combined with the most skilled operating. Here is an example of it:

A fellow-doctor was sent to us early in October, 1909, suffering from a malignant neoplasm at the neck of the bladder, which showed all the usual train of morbid characteristics. M. Pasteau confirmed the diagnosis and proceeded to apply the apparatus. After sounding the infected region by urethroscope, with the aid of a catheter the radium was placed in good position. Now, without the skill and perfect execution of Dr. Pasteau these proceedings would have been harmful. On the contrary, the past seven months have brought about an amelioration in proportion to the series of applications, and at present our fellow-physician is enjoying apparent good health, and micturates only a little more frequently than in a normal con-