

Before operation also come those pathological examinations of the urine, faeces, blood, stomach contents, and pathological discharges, which, as aids to diagnosis, have been long established. Laboratory workers, however, frequently feel very keenly the futility of forming definite opinions of these materials when they are not in possession of all the clinical points.

Again, the presence of the pathologist at this time will suggest more and more new opportunities of taking advantage of the well-known method of removing scrapings or of small portions of the tumor for the purpose of confirming or contradicting a provisional diagnosis.

(2) At the operation. The more thorough the surgeon's knowledge of the pathology of tumors is, the greater will be his ability to diagnose and treat them efficiently. Yet his insight into the details of their growth can hardly be as extensive as that of the pathologist, who is devoting his time to a special study of their structure. The presence of the latter during the operation to add his opinion is, therefore, often advisable.

Another important point is the making of microscopical sections during the progress of the operation, a procedure which has developed to a considerable degree in the last few years. By means of the wonderful improvements in the freezing microtome and the special stains (such as Unna's polychrome methylene blue) a most satisfactory section can be mounted in from one to two minutes. The forming of an opinion as to the nature of the section will depend, in point of time, on its structure, whether typical or not; but in most cases this whole procedure can be completed without materially delaying the operation, the surgeon using this time for tying vessels or carrying out other details in the technique of the operation. It has, therefore, become essential that an operating theatre should have in an adjoining room the pathological equipment necessary for the carrying out of this method.

(3) After the removal of the tumor. "It is by a study of the general structure and of the topography of tumors, as well as of the character of their individual cells, that we are enabled to determine their nature. As a rule, the peripheral portions of the more rapidly growing tumors, in which there is a suspicion of malignancy, are best adapted for microscopical examination, because the invasion of the adjacent tissues by eccentric or peripheral growth is one of the very elements of malignancy, and also because in this area secondary degenerative changes are less likely to occur than in the central parts." It is in the recognition of this invasion and of the typical character of the indi-