

(and more strongly with increasing experience) that all types of malignant tumors are of extrinsic origin. It is not improbable that what we have hitherto included under the vague term of hereditary influence may some day be proven contagion or virus, as has already been done in tuberculosis. . . . Whether we accept the parasitic theory of cancer, or still believe in its intrinsic origin, we must admit that trauma plays a direct and important part in the development of cancer. The argument advanced by some writers that if such were true, all cases of trauma or a larger proportion of cases ought to be followed by cancer, is not logical.

"If fifty people were plunged into an icy pond and only two developed pneumonia, by this same reasoning we might say that, because 48 remained well, the shock and exposure were not causative factors in the development of the pneumonia in the two who contracted it.

"The great argument advanced by Segond against the admissibility of trauma as a causative factor in malignant disease is the absence of any definite knowledge of the condition of the parts prior to the accident.

"In order to have such knowledge scientifically acceptable, he believes that there should be evidence of a medical examination of the locality prior to the injury, and such evidence, he states, is entirely lacking, there being no such cases. My own series of cases supplies this deficiency in at least four instances." He then cites the cases:

1. A case of sarcoma of the humerus; injury producing a fracture of the upper and middle third; X-ray showing absolutely normal structure of bone. Six weeks later X-ray, showing a well-developed sarcoma at the exact site of the fracture.

2. Sarcoma in the groin, starting at the exact site of a hernia incision made four weeks before.

3. Sarcoma starting in the fascia about the external malleolus three weeks after the trauma incident to the stretching and tearing of the fascia and ligaments due to the forcible correction of a flat foot.

4. Sarcoma of femur, in a girl nine years of age, the daughter of a surgeon.

Dr. Coley's paper is to be continued, presumably in the May number of the *Annals*, and should prove of great interest, both by virtue of what we have already read, and also because of the authority which his vast experience in the treatment of malignant disease with the mixed toxins has given him.

T. B. R.