increase in this type of cells in the circulating blood. Other authors reported the presence of an eosinophilia of the blood as a characteristic feature in workers professionally exposed to roentgen-rays and radioactive substances (Aubertin; and Goodfellow). Laborde and Leclercq stated that the blood of radiologists often shows an eosinophilia (in 30 per cent of the cases present, but not surpassing 7 to 8 per cent eosinophilic cells) with a polymorphonuclear leucocytosis, both being expressions of a hyperfunction of the bone marrow. Such a reaction may culminate occasionally in the development of a leukemia, which is of a myeloid type. Similar observations were recorded by Cornil and Rouslacroix, who made a hematological study of the personnel of the anti-cancer centers of Marseilles. They found that in addition to the existence of a hyperleucocytosis in some instances, there was an eosinophilia (6 to 10 per cent) in 23 per cent of the persons examined.

In a survey conducted by Stewart on the occurrence of industrial poisoning from radioactive substances (1929), this investigator found, among chemists employed in laboratories and plants handling this material, evidence of a bone marrow proliferation stimulating action following such an exposure. In four cases of radium poisoning, observed among workers of a plant in Connecticut, two had relatively high leucocytic values in the presence of a severe reduction of erythrocytes [1,970,000 erythrocytes and 10,200 leucocytes in the first case, and 768,000 erythrocytes and 18,000 leucocytes (40 per cent polymorphonuclears, 35 per cent large mononuclears, and 25 per cent lymphocytes) in the second case]. The appearance of an increased number of eosinophilic cells, indicating an overexposure, was occasionally accompanied by abnormal or embryonic leucocytes.

In addition to these relatively common leucocytotic, hyperplastic, hematic reactions after irradition with roentgen-rays and radioactive substances, a few cases were described in which the occupational exposure to these actinic agents resulted in the production of reactions of a strong leukemoid type. Preleukemic blood changes have been seen very rarely in radiologists, according to Laubry and Marchal, who mentioned that Aubertin observed two such cases. The radiation hyperleucocytosis lasted for several months after cessation of their professional contact with roentgen-rays; but 18 months later both men were again in good health. Such a quick return to normalcy was not always the outcome of leucocytic blood reactions of this genesis.

While engaged in a search for the occurrence of preparatory, subleukemic or preleukemic conditions in individuals exposed chronically to roentgen-rays, Aubertin made the following observations in a radiologist. This individual was a thirty-eight-year-old male, who had been in contact with roentgen-rays in his professional work for a period of thirteen years. This person suddenly developed an attack of extreme fatigue and his blood picture showed 5.27 million erythrocytes and 11,625 leucocytes, of which 63 per cent were polymorphonuclear neutrophiles, 6 per cent eosinophiles, 4 per cent