My dear Winge,

I was very much interested to get your letter, as the claim that cigarette-smoking is a proved cause of lung cancer, I believe, should never have been made, and grows weaker the more the evidence is examined.

I have recently received from Verschuer some twin data which showed a decided genetic differentiation between the classes into which people classify themselves in respect of smoking, and this, I believe, explains such eccentricities of the facts ascertained so far as that the products of combustion applied to cigar smokers and to pipe smokers should not be associated with cancer of the lung, though in the case of cigarette smokers they seem to be so, or the curious further fact that among cigarette smokers those who inhale have actually less and not more cancer of the lung than those who do not inhale.

Some twenty or more years ago, in fact, I believe E. B. Wilson of the Harvard School of Public Health recognized the statistical association and was engaged in some discussions which did not, however, lead to the claim that the products of combustion were in this case a causal agent. The reason may have been that Green, associated with the Bar Harbor Cancer Research Station, had developed a very delicate technique for detecting carcinogenic action using embryonic mouse lung tissue treated
with the supposed carcinogen and grafted, with the result that though other carcinogens were easily detected in this way, nothing could be found in pipe scrapings, condensates from smoking machines, and other material which smokers might be affected by.

In answer to your question, I believe Roentgen-irradiation is in one sense a key to the great apparent increase during the present century of lung cancer, for by its means this has become one of the most easily diagnosed of all cancers, and radiological equipment, training in radiology, and therefore the availability of skilled radiologists, has most certainly increased vastly during the last 40 years.

Whether there has been any real increase in this disease has been disputed by Ian MacDonald, who suggests that post mortem frequencies have not increased. However, I think there may have been a real increase due to the increased urbanization which most modern populations have experienced, for there seems to be no doubt that the incidence of cancer of the lung in London and New York is something like four times as great as in corresponding rural areas.

Your suggestion that mass radiology, which we also practise on an enormous scale for the detection of tuberculosis, may provide a direct stimulus to the development of the pre-cancerous condition, is one that I believe should be taken seriously, though I have not the knowledge to form any very definite opinion about it.

With best wishes to yourself and your wife,

Sincerely yours,