LIFE EXPECTANCY AND INCIDENCE OF MALIGNANT DISEASE.

II. CARCINOMA OF THE LIP, ORAL CAVITY, LARYNX, AND ANTRUM

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The life expectancy of oral carcinoma is known to vary considerably depending upon the primary site of the lesion, but no adequate number of cases has been studied to measure accurately the relative malignancy of these various types. We have attempted in this paper to present such a series, comprehensive enough to make these comparisons.

The methods employed in the determination of life expectancy have been described in a previous communication (1). The material was obtained from the Collis P. Huntington and Pondville Hospitals, and includes all cases admitted before the year 1933. Patients observed up to 1936 have been included in the determination of sex and age incidence.

Classification of the primary site of the oral carcinoma has been made from a personal review of all the records. Every case of carcinoma of this region was included except those in which the diagnosis was doubtful, or in which the age at onset was not clearly determined. In addition, a small number which were traced less than one year from onset of the disease, averaging about 2 per cent in each group, were excluded from the life expectancy studies, though included in the age incidence series. Data are presented on carcinoma of the lip, buccal mucosa, palate, upper and lower alveoli, tongue, floor of the mouth, tonsil, pharynx, larynx, and antrum.

A large number of patients in this series did not have their first treatments in the Pondville or Huntington Hospitals. It must be stressed, therefore, that these curves do not necessarily represent the type of treatment available nor give a true index of the five-year survivals obtained in cases treated primarily in those institutions.

CARCINOMA OF THE LIP

This series includes the epidermoid carcinomas and an occasional adenocarcinoma of the lips. Carcinomas of basal-cell origin are excluded. On the upper lip carcinomas frequently arise from the skin rather than from the mucocutaneous border. Such cases are really carcinomas of the skin and are not included here.

The date of onset of carcinoma of the lip has been difficult to determine in many cases because of an indefinite history of scaling or scabbing for a

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3 The term “life expectancy” is employed in these papers in which the median case is considered the more significant, in contrast to the usual term, “expectation of life,” which is based upon the average.
period of years, due undoubtedly to keratoses or leukoplakia. The date of onset of the carcinoma was taken as that time at which the character of the lesion changed.

There were 990 carcinomas of the lip available for life expectancy studies; 41 cases (4.2 per cent) were lost, having been traced less than one year from onset.

**Untreated Cases:** There were 20 untreated cases of carcinoma of the lower lip, a number too small to be of statistical significance, but yet indicative of the general trend. These patients had a shorter life expectancy than those with untreated carcinoma of the breast or skin, but longer than that for any other organ. As shown in Fig. 1, 50 per cent of the patients were dead in

![](image)

**Treated Cases, Lower Lip:** Of the 929 patients receiving treatment for carcinoma of the lower lip, 50 per cent were dead in 5.5 years, 75 per cent in 10.5 years. Five years after onset 52.5 per cent of the patients were dead; at 10 years, 73.5 per cent. The median age at onset was 62 years. The median length of life for a normal male 62 years of age, determined from the Massachusetts Life Tables for 1910, is 11.5 years. Fifty per cent of all patients developing carcinoma of the lip are dead in 5.5 years. The life expectancy of a patient with cancer of the lip at the median age is, therefore, slightly less than half that of a normal person at that age.
There is, however, variation of the life expectancy with age. It will be recalled that carcinoma of the breast is most malignant in the age group below 40 and least so in the older age group, above 60 (1). The life expectancy of patients with carcinoma of the lip, divided into different age groups, is shown in Table I. In Fig. 8 these cases are collected into three

<table>
<thead>
<tr>
<th>Table I: Life Expectancy by Age Groups: Carcinoma of the Lip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>9</td>
</tr>
<tr>
<td>10</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Number of cases</td>
</tr>
</tbody>
</table>

age groups, the first representing the 188 cases the onset of which was at the age of 48 or below, the second 548 cases between the ages of 49 and 70, and the third including the 193 cases that had their onset at the age of 70 or beyond. The normal expectation of life is plotted with the corresponding curve, employing the median age of each group. For convenience, a logarithmic scale has been used. The percentage of patients alive at any time interval may be determined by reading directly from the curves.

It will be seen that five years after onset, 62 per cent of the patients in the youngest group, 56 per cent of the middle-aged, and 33 per cent of the oldest are alive. At nine years the percentages are, respectively, 38, 30, and 15. One might infer that carcinoma of the lip is most malignant in the old, but a comparison of these figures does not indicate the relative malignancy of carcinoma of the lip at different ages, because normally the expectation of life is much lower in advanced age. Hence the spread between the curves of the normal expectation and that of carcinoma of the lip is the important consideration.

As an example the youngest group may be chosen. Normally only 10 per cent of men alive at the age of 40 (the median for this group) will be dead 9 years later. Of patients with carcinoma of the lip, however, 52 per cent were dead 9 years after onset, i.e. 5.2 times the normal number. Similar ratios may be determined for the different age groups for varying intervals after onset. They may be summarized as follows:

<table>
<thead>
<tr>
<th>Ratio Dead with Cancer of the Lip Compared with Normal Death Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>48 and below</td>
</tr>
<tr>
<td>49-70</td>
</tr>
<tr>
<td>71 and over</td>
</tr>
</tbody>
</table>
It must be concluded that there is a definite relation between the life expectancy with carcinoma of the lip and the age of the patient, provided a correction is made for the normal life expectancy; the disease is more malignant in the young and less so with advancing age.

Treated Cases, Upper Lip: There were 41 cases in which it was certain that the disease arose from the vermilion border of the upper lip. The series is small but indicates that the life expectancy of carcinoma of the upper lip is less than that of cancer of the lower lip. Fifty per cent of the patients were dead 3.5 years after onset. Five years after onset 58 per cent were dead, and at 9 years 66 per cent. Of the upper lip carcinomas, 29.6 per cent occurred in females, compared with 2.0 per cent of those originating from the lower lip. The median age of the group is 65 years.

Carcinoma of the Tongue

There were 835 patients with carcinoma of the tongue entering the Huntington and Pondville Hospitals before 1933. Of this group, 46 received no treatment, 302 were treated in the Huntington Hospital during the years 1912–22 inclusive, 340 at that hospital in 1923–32, and 147 at Pondville in 1927–32. In this group there were 62 females, or 7.4 per cent. Five cases (0.6 per cent) were lost, having been followed less than one year from onset.

Untreated Cases: The patients who received no treatment either refused it or, in a few exceptional instances, were judged to be too far advanced
even for palliative measures. The outstanding feature of this series of cases is the rapid course of the disease (Fig. 4). At the end of one year after onset 62 per cent of the group were dead, and at the end of two years, 86 per cent. The patient surviving longest lived 2.9 years. Fifty per cent of the patients were dead 10 months from onset. The median age of the untreated group was 61, nearly the same as that of the treated, which was 60.

Treated Cases: The curve showing all treated cases is also given in Fig. 4. Of the 789 patients, including both males and females, 25 per cent were dead in 11 months, 50 per cent in 17 months, and 75 per cent in 28 months. Five years after onset 90 per cent of the patients were dead and at 8 years 96 per cent.

The curve falls very rapidly during the first two years. Four years after onset of the disease the slope of the curve is nearly the same as that of the life expectancy of a normal person at that age. In other words, there are few deaths from treated carcinoma of the tongue after 4 years from onset. Since the median life expectancy for a man of 60 is 12.5 years, and for one with carcinoma of the tongue only 17 months, at the median age the life expectancy of normal persons is about 8 times that of those with cancer.

Time of Treatment and Life Expectancy: In Fig. 5 is shown the life expectancy of patients entering these hospitals during different periods. The curve derived from the cases treated in the Huntington Hospital during the decade 1923–32 is about 30 per cent higher than for the years 1912–22. This probably represents a real advance in therapy, although it must be recognized that there has been a change in the type of cases referred to the hospital.
Life expectancy
Carcinoma tongue
Untreated males (46 cases) --
Treated  (♂ and ♀) (798 ♂)
females (62 ♂)

Fig. 4

Life expectancy
Carcinoma tongue
Huntington : 1912–22
" 1923–32
" 1927–32

Fig. 5
The Huntington curve for the years 1912–22, when more terminal cases were received, is about the same as the curve from the Pondville Hospital, where a high percentage of the patients are referred to the hospital for terminal care.

Age and Life Expectancy: If the patients with carcinoma of the tongue are divided into three age groups, it will be found that there is no significant variation of the life expectancy with age (see Fig. 9). If, however, each curve is compared with the normal life expectancy at the median age for each group, in the same manner as was done with carcinoma of the lip, a more important variation will be found.

<table>
<thead>
<tr>
<th>Age</th>
<th>3 years after onset</th>
<th>5 years after onset</th>
</tr>
</thead>
<tbody>
<tr>
<td>48 and below</td>
<td>20.0</td>
<td>14.5</td>
</tr>
<tr>
<td>49–70</td>
<td>6.8</td>
<td>4.5</td>
</tr>
<tr>
<td>71 and over</td>
<td>3.1</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Apparently carcinoma of the tongue is definitely less malignant in the old and more malignant in the young when compared with the normal life expectancy.

Sex and Life Expectancy: The life expectancy of patients with carcinoma of the tongue is slightly greater in the female than in the male (Fig. 4). Sixty-two females are represented in the curve.

It is difficult to compare this series of cases with others reported in the literature. The most extensive compilation of statistics has been made by Lane-Claypon (2). She concluded that 20–25 per cent of all patients operated on are alive and well 3 years after operation. The average delay from onset to treatment in our series was slightly over 4 months. Three years and four months after onset, 17.7 per cent of our entire group were living. These two figures cannot be compared more accurately, since Lane-Claypon found it impossible to determine the operability of her series.

Carcinoma of the Buccal Mucosa

We have included carcinomas originating on the inside of the cheek in this group. Many showed a secondary involvement of the alveoli or tonsil or tongue. The life expectancy curves represent 300 cases. Seven cases, 2.3 per cent, are excluded since they were traced less than 2 years from onset. The median age was 60.

Twenty-five per cent of the patients were dead in a year, 50 per cent in slightly less than 2 years, and 75 per cent in 4.5 years (Fig. 2). Six years after onset 80 per cent were dead, and at 10 years 92 per cent. The life expectancy is better for carcinoma of the buccal mucosa than for any other type of intraoral cancer, due to the accessibility of the lesion and to the fact that the tumors are usually well differentiated and are frequently of a papillary type.

There are few series of cases reported fully enough to allow comparison. Martin and Pfleuger (3) have analyzed carefully a series of 99 unselected cases from the Memorial Hospital for the years 1925 through 1929. They
found that 30 per cent of all patients were alive five years after treatment. This is a higher percentage than in our group. Our average delay to treatment was 4 months; 5.3 years after onset 22 per cent of our patients were alive.

Opinions from different clinics concerning the relative malignancy of carcinoma of the buccal mucosa vary considerably. Martin and Pflueger believe the prognosis is about the same as in carcinoma of the lip except that patients of the latter group appear earlier for treatment. Pólya (4) believes that cancer of the buccal mucosa is intermediate in malignancy between cancer of the lip and of the tongue. New and Brewer (5) have considered its malignancy to be very high.

Our data show that 5 years after onset of the disease there are 2.3 times as many patients alive with cancer of the lip as with cancer of the buccal mucosa. There are, at the same period, 2.1 times as many patients alive with cancer of the buccal mucosa as with cancer of the tongue. Therefore, from the third to the eighth year after onset, carcinoma of the buccal mucosa is approximately twice as malignant as cancer of the lip and half as malignant as cancer of the tongue.

Carcinoma of the Palate

With carcinomas originating on the hard or soft palates extension to adjacent structures occurred frequently. With the exception of carcinoma of the buccal mucosa, that of the palate is the least malignant of the intraoral cancers, since the palate is frequently the site of low-grade papillary growths. The prognosis is slightly better than with carcinoma of the upper jaw.

Our life expectancy curve is based upon 174 cases (Fig. 2). One case was lost, having been followed less than two years from onset. The median age of the group was 61. The median length of life was 1.5 years. Twenty-five per cent of the patients were dead in one year, and 75 per cent in 3.5 years. Five years after onset of the disease 81 per cent of the patients were dead, and at 10 years, 93 per cent.

Carcinoma of the Upper Alveolus

Carcinoma of the upper alveolus has a life expectancy midway between carcinomas of the buccal mucosa and of the tongue. In many ways it resembles carcinoma of the antrum, and when both the upper alveolus and antrum are involved it is frequently difficult to determine the primary site. Cancer of the upper alveolus is, however, less malignant than cancer of the antrum. Our life expectancy curves are based upon 137 cases. Two cases were not followed. The median age for the series is 60 years. Reference to Fig. 2 shows that 25 per cent of the patients were dead in 1 year, 50 per cent in 20 months, and 75 per cent in 3.5 years. Five years after onset 83 per cent of the patients were dead.

Seventeen per cent of the total number of cases were found in females. This percentage is higher than in any other type of intra-oral cancer. In this respect also cancer of the upper alveolus is comparable to cancer of the antrum.
The prognosis of carcinoma of the lower alveolus is only slightly better than that of carcinoma of the tongue. The life expectancy curve, based on 237 cases, shows that 25 per cent of the patients died in a year, 50 per cent in 1.5 years, and 75 per cent in 2.75 years (Fig. 2). Six cases (2.5 per cent) were not followed. The median age at onset was 61 years. Five years after onset 87.5 per cent of the patients were dead, and at 10 years, 96 per cent.

**Carcinoma of the Floor of the Mouth**

The life expectancy of patients with carcinoma of the floor of the mouth is slightly less than that of those with carcinoma of the tongue (Fig. 3). The curve is based on 250 cases. Six cases (2.4 per cent) were not traced. Twenty-five per cent of the patients were dead in 9 months, 50 per cent in 17 months, and 75 per cent in 28 months. Five years after onset 92 per cent were dead, and at 8 years 95 per cent. The median age is 62 years. Of the total series 3.6 per cent were females; this is the lowest percentage of any in the intra-oral group.

**Carcinoma of the Tonsil**

As compared with anterior lesions of the oral cavity, carcinomas originating in the posterior portions are of a higher degree of malignancy and are generally less accessible for treatment. Thus carcinoma of the tonsil is the most malignant of the intra-oral cancers, with the exception of cancer of the pharynx. Twenty-five per cent of the patients were dead in 10 months, 50 per cent in 15 months, and 75 per cent in 23 months. The life expectancy curves are based on 291 cases. One case was lost. The median age of the entire group was 62. Five years after onset of the disease 92.5 per cent of the total number of patients were dead, and at 10 years 96 per cent. The prognosis of malignant lymphoma of the tonsil will be discussed in a later paper.

**Carcinoma of the Pharynx**

Patients with carcinoma of the pharynx in this series of cases had the poorest prognosis of any with intra-oral cancer. This group includes cancers of the nasopharynx and lower pharynx; the latter group has a definitely lower life expectancy than the former. Twenty-five per cent of all the patients were dead in 8 months, 50 per cent in 14 months, and 75 per cent in 22 months (Fig. 3). Five years after onset only 7 per cent of the total group were alive. The life expectancy was determined from 131 cases. Six cases (5.5 per cent) were not followed. The median age of the entire group at onset was 58 years. Twenty-eight of the patients (21 per cent) were females.

Very few of the cases were treated with methods advocated in recent years, that is with repeated small doses of radiation, reaching higher totals than in early years. It is interesting in this respect to review Coutard's results, as they represent the best available in this type of tumor. Of carcinomas of the tonsil, larynx, and lower pharynx, he found the last the least responsive.
In his early series of 89 cases of cancer of the lower pharynx treated in 1921–26, 9 patients (10 per cent) were alive and symptom-free in 1931. The others, with a single exception, died of cancer. Twenty-three per cent of his patients with carcinoma of the tonsil, and 28 per cent with cancer of the larynx were alive and symptom-free in 1931.

**Carcinoma of the Antrum**

There were available for life expectancy studies of carcinoma of the antrum (Fig. 6) 106 cases; 13 cases were not traced. Females constituted 35.5 per cent of the series, a higher percentage than in any of the other groups mentioned in this paper. Twenty-five per cent of the patients were dead in 10 months, 50 per cent in 17 months, 75 per cent in 32 months. The life expectancy is not quite so high as in carcinoma of the upper alveolus.

**Carcinoma of the Larynx**

There were 332 cases included in the life expectancy studies (Fig. 6) for laryngeal carcinoma. Five cases (1.6 per cent) were not followed. The median age was 57 years. Twenty-three cases were untreated. The longest survival in this group was 5.5 years. This was exceptional, however, for 95 per cent of the patients were dead 2 years after onset of the disease; 50 per cent were dead one year after onset if the disease was not treated.

In 25 cases tracheotomy alone was done, which in itself prolonged life.
The median length of life in this group was 18 months; 95 per cent were dead in a little over 5 years from onset. The last patient died 8 years after onset. The curves of the cases which were untreated and treated by tracheotomy alone cannot be considered to be statistically significant because of the small number in each group.

All other forms of treatment are united in the third curve. There is moderate improvement over simple tracheotomy. The median length of life is the same; 95 per cent were dead 6.5 years after onset.

**DISCUSSION**

Lane-Claypon has stated (2) that the "data for the results of treatment of cancers in the various parts of the mouth other than the tongue are scanty and insufficient to afford a reliable basis for statistical information relative to the results in cancer of the tongue." We believe that the curves presented above furnish a reasonably accurate comparison of the behavior of the various types of oral carcinoma. Least malignant of all is carcinoma of the lip. Cancers of the intra-oral group, arranged in order of increasing malignancy, are as follows: carcinoma of the buccal mucosa proper, of the palate, of the upper alveolus, of the lower alveolus, of the tongue, of the floor of the mouth, of the tonsil, and of the pharynx. Carcinoma of the larynx has a life expectancy that is nearly the same as cancer of the tongue, while that of the antrum is slightly poorer than that of the upper alveolus.
Simmons (7) has presented a series of five-year cures of oral carcinoma obtained by operation and has obtained an order of malignancy approximately the same as ours. Lund (8) has analyzed carefully an extensive series of cancers of the lip and buccal mucosa, noting the various prognostic factors. While it is clear, therefore, that various types of malignant tumors of the oral cavity have varying life expectancies, it is of interest to combine them to show the general prognosis of oral carcinoma. For this purpose carcinomas of the lip, larynx, and antrum are excluded, leaving carcinoma of the pharynx, tonsil, floor of the mouth, tongue, alveoli, palate, and buccal mucosa (Fig. 7).

Data derived from the entire group of 2345 treated cases of oral carcinoma may be summarized as follows: 34 cases (1.4 per cent) were untraced, having been followed less than one year from date of onset of the disease; 15 patients (0.6 per cent) were alive when last traced, between one and two years after

![Graph showing life expectancy and incidence of malignant disease](image-url)
onset, 10 (0.4 per cent) between the second and third years, and 26 (1.1 per cent) between the third and fourth years. All other cases (96.5 per cent) were followed either to death or over four years from onset.

In the entire group there were 112 untreated cases, including 46 carcinomas of the tongue, 17 of the tonsil, 12 of the buccal mucosa, 9 of the lower alveolus, 8 each of the upper alveolus and pharynx, 7 of the palate, and 5 of the floor of the mouth. The median age of the entire untreated group was 61 years, while that of the treated group was slightly over 60 years. The median length of life of the untreated cases was 10 months. Seventy-five per cent of the patients were dead in 16 months; 95 per cent in 2.5 years. One patient with carcinoma of the lower alveolus lived 3 years, one with carcinoma of the buccal mucosa 54 months. All of the others died less than 3 years after onset. The final curve is almost identical with that of the untreated cases of carcinoma of the tongue.

A series of 369 untreated cases of cancer of the tongue and mouth was collected by Greenwood (10) from English hospitals. The mean duration
of the disease was found to be 16.5 months. This is considerably longer than in our group.

The median ages are highest in carcinoma of the tonsil and floor of the mouth (62 years), and lowest in carcinoma of the pharynx (58). In the intermediate group are cancer of the palate and lower jaw (61), of the upper jaw, buccal mucosa, and tongue (60).

Females have a decidedly better prognosis than males. This is due in part to the fact that carcinoma of the more benign areas, i.e. palate and upper alveolus, is more common in females, and in part to the lower grade of malignancy, as illustrated by carcinoma of the tongue. Coutard (6) found, in a comparable series of cancer of the pharynx, tonsil, and larynx, that 60 per cent of the females were cured compared to 16 per cent of the males. Taylor (11) has also emphasized the better prognosis in females. He ascribes it to a lower incidence of syphilis, to fewer carious teeth, and to a less universal use of tobacco.

### Table II: Percentage of Females

<table>
<thead>
<tr>
<th>Site of Carcinoma</th>
<th>Total Patients</th>
<th>Number of Females</th>
<th>Percentage of Females</th>
<th>Percentage of Females in Pack's Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lip</td>
<td>1240</td>
<td>41</td>
<td>3.3</td>
<td>5.8</td>
</tr>
<tr>
<td>Lower</td>
<td>1186</td>
<td>25</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>54</td>
<td>16</td>
<td>29.6</td>
<td></td>
</tr>
<tr>
<td>Oral cavity</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Tongue</td>
<td>945</td>
<td>67</td>
<td>7.1</td>
<td>13.1</td>
</tr>
<tr>
<td>Palate</td>
<td>202</td>
<td>22</td>
<td>10.9</td>
<td></td>
</tr>
<tr>
<td>Buccal mucosa</td>
<td>371</td>
<td>36</td>
<td>9.6</td>
<td>10.5</td>
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<tr>
<td>Upper alveolus</td>
<td>158</td>
<td>38</td>
<td>24.1</td>
<td></td>
</tr>
<tr>
<td>Lower alveolus</td>
<td>320</td>
<td>20</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>Floor of mouth</td>
<td>282</td>
<td>11</td>
<td>3.8</td>
<td>5.1</td>
</tr>
<tr>
<td>Pharynx</td>
<td>168</td>
<td>39</td>
<td>23.2</td>
<td>24.4</td>
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<td>Tonsil</td>
<td>352</td>
<td>31</td>
<td>8.7</td>
<td>9.2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>9.4</td>
</tr>
<tr>
<td>Larynx</td>
<td>394</td>
<td>25</td>
<td>6.4</td>
<td>8.8</td>
</tr>
<tr>
<td>Antrum</td>
<td>135</td>
<td>49</td>
<td>35.9</td>
<td>33.8 (including upper alveolus)</td>
</tr>
</tbody>
</table>

Of the large group of males, 50 per cent were dead in 17 months, and 75 per cent in 30 months. Five years after onset 88 per cent of the patients were dead. The slope of the normal life expectancy curve at the age of 59 is the same as that of the patients with cancer four years after onset of the disease. Thereafter they run nearly parallel.

While the details of age incidence cannot be discussed fully, it will be seen that, in general, the peak incidence for oral cancer is about 10 years later than in cancer of the breast. As in carcinoma of the breast, and for the same reasons, there is an increasing susceptibility with advancing age.

The percentage of females in the various types is shown in Table II. Of the total number 9.4 per cent were females, a lower percentage than for any other type of malignancy common to both sexes.

It is of interest to consider the youngest patients. Below the age of 25 there were 6 cases of carcinoma of the pharynx, 4 of the lip, 2 of the larynx,
1 of the tonsil, 1 of the tongue, 2 of the palate, and 2 of the antrum. There were only 3 cancers observed in patients over 90 years of age—all of the lip. In general terms, a third of the carcinomas in this group occur below the age of 55, a third from 55 to 65, and the remaining third thereafter. The peak of age incidence, both for males and females, lies between 55 and 65 years. The general distribution is approximately the same as that of Pack and LeFevre (12).

Conclusions

1. The median life expectancy of untreated cases of intraoral carcinoma is 10 months, and of carcinoma of the larynx 12 months.
2. The median life expectancy of patients with treated carcinoma of the lip is 66 months; of the buccal mucosa, 24 months; palate, 18 months; upper alveolus, 20 months; lower alveolus, 18 months; tongue, 17 months; floor of the mouth, 17 months; tonsil, 15 months; pharynx, 14 months; antrum, 17 months; and larynx, 18 months.
3. The median life expectancy of all treated cases of intraoral carcinoma is 17 months in males, 21 months in females.
4. The age of a patient with carcinoma of the tongue does not influence his life expectancy, but, when compared with normal life expectancy, carcinoma of the tongue is most malignant in the young.
5. Patients with carcinoma of the lip have a decreasing life expectancy with advancing age, but this is due to the normal fall in expectancy with age; when compared with the normal fall in life expectancy, carcinoma of the lip is also more malignant in the young.
6. Data on sex and age incidence are presented.

Bibliography