

Sable rabbits, and the scarcity with which the same sites were affected in animals of the Dutch breed.

In order to test the significance of the observed departures from the expected distribution, the chi-square test was employed.² The observed values were found to be so nearly like the expected values that departures as great as or greater than those observed could occur due to purely random sampling (Chi-square = 88.28, $n = 100$, $P = 0.6$, not significant†). The totals for each breed and each organ by this test likewise revealed no significant departures.

After transplantation into the testicle of 202 rabbits from 19 standard breeds, the Brown-Pearce tumor exhibited a selective and unusual distribution of metastases which affected each breed equally. The differences between various standard breeds of rabbits as to the incidence and number of the primary and metastatic tumor foci were apparently not influenced by a selective liability of certain organs and tissues to the growth of this neoplasm.

10364

Distribution of Metastases in the Brown-Pearce Tumor. II. Effect of Fifteen Years of Transplantation.*

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This analysis is concerned with the possible effect on the distribution of metastases of successive transplants of the Brown-Pearce tumor at monthly intervals for more than 15 years into a variety of rabbits. The data are derived from 2 series of rabbits. The first series of 191 young adult male rabbits of common mongrel type was reported by Pearce and Brown in 1923, shortly after discovery

² Fisher, *Statistical Methods for Research Workers*, 4th ed., Oliver & Boyd, London, 1932.

† The value of P , which is 0.6, is not to be interpreted as a statistically accurate figure, as the number of items in some of the categories is too small. While not all of the categories have the recommended number of items, the value of P indicates so clearly a difference which is not significant, that this departure from the recommended minimum probably does not vitiate the conclusions.

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of the tumor.¹ The second series of 202 young adult male rabbits from 19 standard breeds was reported by the author in 1938.² The animals in both series received a single intratesticular injection of 0.3 to 0.5 cc of a saline emulsion of rabbit tumor tissue. In the first series 114 and in the second series 137 animals presented gross metastases at necropsy. The postmortem technic was the same in both series, but there were slight differences in the particular muscles, bones, and distant nodes selected for examination.

The distribution of metastases in the first and second series is presented in Table I for those sites in the body concerning which comparable data are available. The data for regional and distant metastases are segregated. Both the actual and the expected values are presented.

Neither by local extension nor hematogenous spread was there a significant variation between the actual and the expected values for the distribution of metastases. There was some evidence, furthermore, that the experimental error in the 2 series was unusually small (chi-square = 8.53, $n = 17$, $P = 0.95$). The seemingly low experimental error in the observations is borne out by the coefficient of correlation between the 2 series of +0.9828 ($n = 16$, $P = 0.001-$), a very high and significant value. The regression line is linear.

It was therefore concluded that the Brown-Pearce tumor had undergone no change in the relative distribution of metastases during 15 years of transplantation into the testicle. The distribution of metastases, furthermore, was found to be constant and characteristic for each organ.

10365

Distribution of Metastases in the Brown-Pearce Tumor. III. Effect of Homologous Material.*

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It has been shown that a single injection of a saline emulsion of 0.05-0.1 cc of Brown-Pearce tumor tissue which has been kept

¹ Pearce and Brown, *J. Exp. Med.*, 1923, **38**, 347.

² Casey, *Proc. Soc. Exp. Biol. and Med.*, 1939, **40**, 228.

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