Retrospective Study of Thyroid Cancer Treatment: Aims and Data

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Opinions preferring an individual administration of activity when treating cancer of thyroid gland by ^{131}I prevail. Sufficient quantitative arguments are still not available. They represent, however, a departure point for quantitative recommendations needed if the conjecture behind the above opinions will prove to be true. For this reason, a retrospective study has been proposed. It aims at evaluating relationships of the available patient data to the success of the treatment. Ideally, a recommendation on the administered activity in dependence on biophysical characteristics of the patient should result from this research.

Such a computerized support has to rely on objectively expressible input-output data. On the output side, thyreoglobuline level has been unanimously found as the measurable marker of the treatment success. Input data have to contain everything substantial influencing the final organ doses. Results of diagnostic phase of the treatment (functional thyroid mass, body mass, characteristics of the accumulation abilities of the patient, effective half-life, etc.) serve to this purpose.

At present, we have available about four thousands records of such data. They have been collected approximately for five years. They contain the biophysical information about one thousand patients.

These data have to be complemented by information on significant clinical characteristics influencing the treatment like age, type of the cancer, TNM classification, sex, remnants, etc. This information is collected from sixties and concern more than four thousands patients. This collection is clearly more valuable for the considered study as it covers a wider time-span. Thus, the relationship of the treatment and its results can be more safely judged. The biophysical information is missing in the set and we have to extract it from the other set.

We merge these data sets and complement the missing information (on a patient subset) using clinical notes. Then, the preliminary multivariate statistical analysis follows. Its results are presented.

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