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PAPER TITLE

PROBABILISTIC METHODS IN RADIOECOLOGY:
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ABSTRACT (See instructions overleaf)

Methodological aspects in realization of Probabilistic Methods (PM, i.e., those taking into consideration the corresponding distribution laws for values used) are scrutinized. The idea of using PM in radiology is not new; however, the major part of the works describe inhomogeneities observed (distribution laws) and do not deal with the problems of including the values under consideration in more complex estimation based on operations with these values. Besides, any analysis of problems connected with the use of PM is lacking; so, groundless optimism appears in practical operations with random/distributed values. The wish to "improve" prediction of some values under investigation by using the PM can face ambiguous estimates which cannot be verified in many cases. The problem of final presentation of the values' distribution is far from limited to differences in the modes of integrating the distributions characterizing different compartments. There is also the problem that no distribution laws for source values exist a priori; distribution law can be considered only after detalizing the probabilistic spaces. Significance of the differences appearing in determination of the structure of plant and animal products contamination is considered by concrete examples of contaminated areas. The main characteristics of production contamination structure connected with the use of alternative methodological approaches, different kinds of distribution of input values, as well as ambiguous choice of the main parameters of these distribution are considered.