The Beta-Fisher Snedecor Distribution with Applications to Cancer Remission Data

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Abstract : In this paper, a new four-parameter generalized version of the Fisher Snedecor distribution called Beta- F distribution is introduced. The comprehensive account of the statistical properties of the new distributions was considered. Formal expressions for the cumulative density function, moments, moment generating function and maximum likelihood estimation, as well as its Fisher information, were obtained. The flexibility of this distribution as well as its robustness using cancer remission time data was demonstrated. The new distribution can be used in most applications where the assumption underlying the use of other lifetime distributions is violated.