Abstract

The need of shared decision-making has been discussed by researchers since last few decades and is being practiced in several fields. Medical field is also experiencing its consequent positive impact. Keeping this ongoing trend in mind, this paper proposes a theory-based approach of descriptive decision-making (DM) under the realm of uncertainty along with its application to DM of treatment alternative of newly-diagnosed lung cancer patients. The novelty of this paper is: (1) A discussion on our proposed descriptive decision-making framework that holds the option of incorporating multiple sources of information and a distinctive rule for combining these evidences originated from multiple sources, (2) an application of this DM framework to discuss the variability of decisions regarding treatments of newly-diagnosed lung cancer patients based on their attitudes towards uncertainty.

References

- Hanssen, S. O. , 1994, Decision Theory-A Brief Introduction, Royal Institute of
Technology, Stockholm, 6-15.
- Tacnet, J. M. and Dezert, J., 2011. Cautious OWA and evidential reasoning for decision making under uncertainty, in Proc. 14th Int. Conf. on Information Fusion ,Chicago, USA.
- Tamura, H. and Miura, Y., 2006. Value judgment of the sense of security for nursing


- National Cancer Institute, National Institutes of Health, USA.


Index Terms

Computer Science    Intelligent Systems

Keywords

Uncertainty decision-making Dempster-Shafer theory Prospect Theory combination of evidences

lung cancer diagnosis and staging.