·指南与共识·

基于多模态数据的人工智能方法预测抗肿瘤药物不良反应专家共识Δ

《基于多模态数据的人工智能方法预测抗肿瘤药物不良反应专家共识》编写组，辽宁省生命科学学会临床药学与转化药学分会，中国药师协会药物治疗管理专业委员会，辽宁省医学会血液学专业委员会，中国医药教育协会老年药学专业委员会

中图分类号 R95；R951　　**文献标志码** A　　**文章编号** 1001-0408（2026）14-1797-08
DOI 10.6039/j.issn.1001-0408.2026.14.01

摘　要　目的 为科学、规范地应用人工智能（AI）与多模态数据融合技术，基于多模态数据构建抗肿瘤药物不良反应（ADR）预测模型提供指导性意见，提升抗肿瘤药物治疗的安全性。**方法** 由辽宁省生命科学学会临床药学与转化药学分会等行业学会联合发起，中国医科大学附属第四医院牵头组织，编写组以“多模态数据”“人工智能”“不良反应”“抗肿瘤药物”“模型”等为关键词全面检索国内外数据库，收集指南、专家共识及相关指导性文献，结合我国AI技术在肿瘤药学服务中的实践经验，起草本共识编写大纲；经外审专家组评估和讨论后，编写组结合评估结果并将90%及以上专家同意的内容判定为推荐意见形成。**结果与结论** 经过多轮审议和讨论修订，本共识梳理了“明确研究目标-数据准备-算法框架选择-多模态数据融合策略设计-模型训练与验证-可解释性分析-临床部署-成果发表”的抗肿瘤药物ADR预测模型构建流程，并就数据准备、算法框架选择、多模态数据融合策略设计、模型验证与可解释性分析、临床部署等核心环节形成了18条推荐意见，供肿瘤领域医师、临床药师、研究人员及AI技术开发者参考使用，以协助临床作出最优治疗决策。

关键词　人工智能；多模态数据；抗肿瘤药物；不良反应；预测模型

Expert consensus on artificial intelligence methods based on multimodal data for predicting adverse drug reactions of antineoplastics

Writing Group of *Expert Consensus on Artificial Intelligence Methods Based on Multimodal Data for Predicting Adverse Drug Reactions of Antineoplastics*, Clinical Pharmacy and Translational Pharmacy Society of Liaoning Province Life Sciences Association, Medication Therapy Management Committee of Chinese Pharmacists Association, Hematology Committee of Liaoning Medical Association, Geriatric Pharmacy Committee of China Medical Education Association

ABSTRACT　OBJECTIVE To provide guidance on the scientific and standardized application of artificial intelligence (AI) and multimodal fusion techniques in constructing predictive models for adverse drug reactions (ADR) of antineoplastics, thereby enhancing the safety of antineoplastic therapy. **METHODS** Jointly initiated by the Clinical Pharmacy and Translational Pharmacy Society of the Liaoning Provincial Life Sciences Association and other professional societies, and organized by the Fourth Affiliated Hospital of China Medical University, the writing group conducted a comprehensive search of domestic and international databases using keywords such as “multimodal data” “artificial intelligence” “adverse drug reactions” “antineoplastics” and “models” to collect guidelines, expert consensuses, and relevant guidance literature. Based on this search, and combined with China’s practical experience in applying AI to oncology pharmaceutical care, a consensus framework and preliminary recommendations were drafted. Following evaluation and discussion by an external expert panel, the writing group incorporated the assessment results and formulated recommendations based on those endorsed by 90% or more of the experts. **RESULTS & CONCLUSIONS** After multiple rounds of review, discussion and revision, this consensus outlines the process for constructing an ADR prediction model of antineoplastics, encompassing “defining research objectives-data preparation-selection of algorithmic frameworks-design of multimodal data fusion strategies-model training and validation-interpretability analysis-clinical deployment-publication of results”. It also formulates 18 recommendations regarding core aspects such as data preparation, algorithm framwork selection, multimodal data fusion strategy design, model

Δ**基金项目** 国家自然科学基金项目（No.82473906）

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