·指南与共识·

基于液体活检技术的多癌种联合筛查专家共识(2025 版)

陈万青[1]　陈可欣[2]　贺宇彤[3]　贾卫华[4]　刘芝华[1]　马红霞[5]　缪小平[6]　潘凯枫[7]　吴晨[1]　夏昌发[1]　邢金良[8]　许永杰[1]

基于液体活检技术的多癌种联合筛查专家共识制定工作组

[1]国家癌症中心 国家肿瘤临床医学研究中心 中国医学科学院北京协和医学院肿瘤医院癌症早诊早治办公室,北京 100021; [2]天津医科大学肿瘤医院流行病学研究室 国家肿瘤临床医学研究中心,天津 300060; [3]河北医科大学第四医院肿瘤防治办公室,石家庄 050011; [4]华南恶性肿瘤防治全国重点实验室 广东省鼻咽癌诊治研究重点实验室 广东省恶性肿瘤临床医学研究中心 中山大学肿瘤防治中心,广州 510050; [5]南京医科大学公共卫生学院流行病学系,南京 211166; [6]武汉大学公共卫生学院流行病与卫生统计学系,武汉,430071; [7]北京大学肿瘤医院暨北京市肿瘤防治研究所流行病学研究室 消化系肿瘤整合防治全国重点实验室 恶性肿瘤转化研究北京市重点实验室,北京 100142; [8]空军军医大学基础医学院生理与病理生理学教研室,西安 710032

通信作者:陈万青,Email:chenwq@cicams.ac.cn

【摘要】 恶性肿瘤是全球重大公共卫生挑战,筛查是降低其死亡率的关键手段。然而,目前仅少数癌种有适宜的筛查方法,且传统单癌筛查方法存在侵入性强、准确性低、依从性差等弊端。基于液体活检技术的多癌种早期检测(MCED),通过检测血液等体液中的细胞游离 DNA、细胞游离 RNA、蛋白质和代谢物等标志物,实现了无创、高效的多癌种联合早期检测,显著拓展了可筛查癌种范围及筛查人群覆盖率,展现出改善当前癌症筛查策略的巨大潜力。基于液体活检技术的多癌种联合筛查专家共识(2025 版)系统梳理了基于液体活检技术的 MCED 进展、标志物选择与检测技术、癌种选择、研究设计与临床效用评估以及实施路径等内容,旨在为 MCED 的深入研究与广泛应用提供科学指导,推动恶性肿瘤筛查策略的持续优化。

【关键词】 恶性肿瘤; 液体活检; 多癌种联合筛查; 肿瘤标志物; 专家共识

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Expert consensus on liquid biopsy-based multi-cancer early detection (2025 edition)

Chen Wanqing[1], Chen Kexin[2], He Yutong[3], Jia Weihua[4], Liu Zhihua[1], Ma Hongxia[5], Miao Xiaoping[6], Pan Kaifeng[7], Wu Chen[1], Xia Changfa[1], Xing Jinliang[8], Xu Yongjie[1]

Working Group for the Development of Expert Consensus on Liquid Biopsy-based Multi-Cancer Early Detection

[1]Office of Cancer Screening, National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences & Peking Union Medical College, Beijing 100021, China; [2]Department of Epidemiology, Tianjin Medical University Cancer Institute & Hospital, National

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完善的知情同意流程，确保受检者充分理解检测的局限性和潜在风险。

专家共识意见 11：多癌筛查具体适用人群需综合考量癌种类型、检测性能等多维度因素，携带多癌高风险因素（吸烟、饮酒、肥胖等）的人群可更为积极地考虑筛查；MCED 技术虽有潜力，但需更多临床研究来验证其实际获益。未来投入使用时，可作为现有标准筛查方案的补充，与现有方案协同开展恶性肿瘤筛查（专家推荐等级：强推荐）。

八、小结与展望

基于液体活检技术的 MCED 作为恶性肿瘤筛查领域的重要突破，正在重塑传统的恶性肿瘤筛查模式。本专家共识系统地阐述了 MCED 在多癌种联合筛查中所发挥的关键作用，梳理了其通过无创方式检测 cfDNA、cfRNA、蛋白质和代谢物等生物标志物的技术优势以及开发和应用流程，为克服传统单癌筛查的局限性指明了新的研究方向。随着研究的不断深入和技术的持续进步，MCED 有望在早期恶性肿瘤检测性能方面得到进一步优化与提升，应用成本得到更好的控制，与现有筛查手段形成优势互补的协同筛查模式，最终实现更高效、更精准的恶性肿瘤早诊早治体系，为全球恶性肿瘤负担的降低作出重要贡献。但这一目标的实现仍需科研人员、临床医师、监管机构和企业等多方面的共同努力和协同合作。

编写专家组成员

编写专家组组长　陈万青（国家癌症中心 国家肿瘤临床医学研究中心 中国医学科学院北京协和医学院肿瘤医院癌症早诊早治办公室）

编写专家组成员（按姓氏汉语拼音字母排序）　陈克终（北京大学人民医院胸外科）、陈明远（中山大学附属第五医院鼻咽癌防治中心）、崔巍（国家癌症中心 国家肿瘤临床医学研究中心 中国医学科学院北京协和医学院肿瘤医院检验科）、杜奕奇（海军军医大学第一附属医院消化内科）、郭瑞霞（郑州大学第一附属医院妇科）、郭文治（郑州大学第一附属医院肝胆胰外科）、洪波（中国科学院合肥物质科学研究院临床转化中心）、胡广杰（安阳市肿瘤医院健康体检科）、胡建昆（四川大学华西医院胃癌中心）、黄育北（天津医科大学肿瘤医院肿瘤流行病学研究室）、李学松（北京大学第一医院泌尿外科）、李汛（兰州大学第一医院普外科）、李志刚（上海市胸科医院胸外科）、李子禹（北京大学肿瘤医院胃肠肿瘤中心）、林楠（中山大学附属第三医院肝胆外科）、林子奥（浙江大学良渚实验室）、刘宏旭（辽宁省肿瘤医院胸外科）、刘通（哈尔滨医科大学附属肿瘤医院乳腺外科）、刘也夫（辽宁省肿瘤医院肝胆胰外科）、刘卓炜（中山大学肿瘤防治中心泌尿外科）、吕国悦（吉林大学第一医院肝胆胰外一科）、聂金福（中国科学院合肥物质科学研究院医学物理中心）、施思（复旦大学附属肿瘤医院胰腺外科）、石汉平（首都医科大学附属北京世纪坛医院胃肠外科）、石乐明（复旦大学生命科学学院）、孙阳（福建省肿瘤医院妇科）、王丹波（辽宁省肿瘤医院妇科）、王殊（北京大学人民医院乳腺外科）、文卫平（中山大学附属第一医院耳鼻咽喉科）、吴俊杰（复旦大学附属中山医院内科）、吴小剑（中山大学附属第六医院结直肠肛门外科）、向莎（贵州医科大学第二附属医院健康管理科）、徐红（吉林大学第一医院胃肠内科）、徐杨（苏州大学附属第一医院血液科）、许颂霄（浙江省肿瘤医院医学检验科）、杨帆（北京大学人民医院胸外科）、叶颖江（北京大学人民医院胃肠外科）、易斌（中南大学湘雅医院检验科）、尹荣（江苏省肿瘤医院胸外科）、张韶凯（河南省肿瘤医院肿瘤防治研究办公室）、张勇（滨州医学院附属医院健康体检管理部）、赵群（河北医科大学第四医院外三科）、邹枕玮（武汉市第八医院肿瘤内科）

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