

ISSN 1009-3079 (print)
ISSN 2219-2859 (online)

世界华人消化杂志®

**WORLD CHINESE
JOURNAL OF DIGESTOLOGY**

Shijie Huaren Xiaohua Zazhi

2018 年 8 月 8 日 第 26 卷 第 22 期 (Volume 26 Number 22)



22 / 2018

ISSN 1009-3079



《世界华人消化杂志》是一本高质量的同行评议, 开放获取和在线出版的学术刊物. 本刊被美国国际检索系统《化学文摘》(Chemical Abstracts, CA)、《医学文摘库/医学文摘 (EMBASE/Excerpta Medica, EM)》、《文摘杂志 (Abstract Journal, AJ)》、Scopus、中国知网《中国期刊全文数据库 (CNKI)》和《超星期刊域出版平台 (Superstar Journals Database)》数据库收录.

二零一八年八月八日

第二十六卷

第二十二期

目次

2018年8月8日 第26卷 第22期 (总第606期)

述评

- 1329 胆胰肠结合部疾病的诊治策略

王坚, 王伟

- 1334 PPIs使用与NSAIDs相关小肠损伤: 如何平衡风险和获益

朱兰平, 赵经文, 陈鑫, 王邦茂

- 1340 直肠癌新辅助药物治疗进展

林晓琳, 肖秀英

临床研究

- 1348 双歧杆菌四联活菌辅助治疗对溃疡性结肠炎患者脂质过氧化损伤指标、炎症因子和免疫功能的影响

张燕, 吴绵勇, 陈叶琴

文献综述

- 1355 肝硬化伴胃静脉曲张内镜下治疗进展

刘霞, 汪安江, 李弼民

- 1360 左右半结直肠癌差异的研究进展

孙燕滨, 董俊成, 夏会, 袁学敏, 姜开通

临床实践

- 1364 动态监测生化、凝血指标及Wnt3a对肝硬化肝癌病情评估及预后判断的价值

李淑琴, 朱贤勇, 章剑坚

- 1371 培菲康联合兰索拉唑对消化道溃疡患者临床症状及心理健康状况的影响

赵紫烟

消 息

- 1333 《世界华人消化杂志》参考文献要求
1339 《世界华人消化杂志》栏目设置
1347 《世界华人消化杂志》正文要求
1354 《世界华人消化杂志》性质、刊登内容及目标
1370 《世界华人消化杂志》2011年开始不再收取审稿费

封面故事

刘德良, 博士, 教授, 主任医师, 博士生导师, 410011, 湖南省长沙市芙蓉区人民中路139号, 中南大学湘雅二医院消化内科, 主攻消化内镜诊疗技术与临床应用研究, 在消化道早期癌症及癌前病变、胃肠道黏膜下肿瘤、消化道出血、消化道狭窄、消化道瘘管及异物等的内镜诊治方面积累了丰富的经验. 现任中华医学会消化内镜学分会委员, 中国医师协会介入医师分会常委、湖南省消化内镜学专业委员会主任委员, 湖南省消化病专业委员会副主任委员, 担任*Gastrointestinal Endoscopy*等10余个SCI杂志编委或审稿人, 在*Gastroenterology*、*Gastrointestinal Endoscopy*、*Endoscopy*等杂志发表SCI论文50余篇.

本期责任人

编务 李香; 送审编辑 崔丽君; 组版编辑 张砚梁; 英文编辑 王天奇; 责任编辑 崔丽君; 形式规范审核编辑部主任 马亚娟; 最终清样审核总编辑 马连生

世界华人消化杂志

Shijie Huaren Xiaohua Zazhi

吴阶平 题写封面刊名

陈可冀 题写版权刊名

(旬刊)

创 刊 1993-01-15

改 刊 1998-01-25

出 版 2018-08-08

原刊名 新消化病学杂志

期刊名称

世界华人消化杂志

国际标准连续出版物号

ISSN 1009-3079 (print) ISSN 2219-2859 (online)

主编

程英升, 教授, 200233, 上海市, 上海交通大学附属第六人民医院放射科

党双锁, 教授, 710004, 陕西省西安市, 西安交通大学医学院第二附属医院感染科

江学良, 教授, 250031, 山东省济南市, 中国人民解放军济南军区总医院消化科

刘连新, 教授, 150001, 黑龙江省哈尔滨市, 哈尔滨医科大学第一临床医学院普外科

刘占举, 教授, 200072, 上海市, 同济大学附属第十人民医院消化内科

吕宾, 教授, 310006, 浙江省杭州市, 浙江中医药大学附属医院(浙江省中医院)消化科

马大烈, 教授, 200433, 上海市, 中国人民解放军第二军医大学附属长海医院病理科
王俊平, 教授, 030001, 山西省太原市, 山西省人民医院消化科

王小众, 教授, 350001, 福建省福州市, 福建医科大学附属协和医院消化内科

姚登福, 教授, 226001, 江苏省南通市, 南通大学附属医院临床医学研究中心

张宗明, 教授, 100073, 北京市, 首都医科大学北京电力医院普外科

编辑委员会

编辑委员会成员在线名单, 详见:

<http://www.wjgnet.com/1009-3079/editorialboard.htm>

编辑部

马亚娟, 主任

《世界华人消化杂志》编辑部

Baishideng Publishing Group Inc
7901 Stoneridge Drive, Suite 501, Pleasanton, CA 94588, USA

Fax: +1-925-223-8242

Telephone: +1-925-223-8243

E-mail: wjgd@wjgnet.com<http://www.wjgnet.com>

出版

百世登出版集团有限公司

Baishideng Publishing Group Inc
7901 Stoneridge Drive, Suite 501, Pleasanton, CA 94588, USA

Fax: +1-925-223-8242

Telephone: +1-925-223-8243

E-mail: bpgoffice@wjgnet.com<http://www.wjgnet.com>

制作

北京百世登生物医学科技有限公司
100025, 北京市朝阳区东四环中路62号, 远洋国际中心D座903室
电话: 010-85381892
传真: 010-85381893

《世界华人消化杂志》是一本高质量的同行评议, 开放获取和在线出版的学术刊物. 本刊被美国国际检索系统《化学文摘》(Chemical Abstracts, CA)、《医学文摘库/医学文摘(EMBASE/Excerpta Medica, E M)》、《文摘杂志(Abstract Journal, AJ)》、Scopus、中国知网《中国期刊全文数据库(CNKI)》和《超星期刊出版平台(Superstar Journals Database)》数据库收录.

《世界华人消化杂志》正式开通了在线办公系统(<https://www.baishideng.com>), 所有办公流程一律可以在线进行, 包括投稿、审稿、编辑、审读, 以及作者、读者和编者之间的信息反馈交流.

特别声明

本刊刊出的所有文章不代表本刊编辑部和本刊编委会的观点, 除非特别声明. 本刊如有印装质量问题, 请向本刊编辑部调换.

定价

每期90.67元 全年36期3264.00元

© 2018 Baishideng Publishing Group Inc. All rights reserved.

Contents

Volume 26 Number 22 Aug 8, 2018

EDITORIAL

- 1329 Diagnosis and treatment of diseases in biliary-pancreatic-duodenal junction

Wang J, Wang W

- 1334 Proton pump inhibitor usage and nonsteroidal anti-inflammatory drugs-associated small intestinal injury: How to balance risks and benefits

Zhu LP, Zhao JW, Chen X, Wang BM

- 1340 Progress in neoadjuvant drug therapy of rectal cancer

Lin XL, Xiao XY

CLINICAL RESEARCH

- 1348 Effect of adjuvant therapy with
- Bifidobacterium quadruple bacteria tablets*
- on lipid peroxidation injury markers, inflammatory factors, and immune function in ulcerative colitis patients

Zhang Y, Wu MY, Chen YQ

REVIEW

- 1355 Progress in endoscopic treatment of gastric varices in patients with liver cirrhosis

Liu X, Wang AJ, Li BM

- 1360 Difference between right and left colorectal cancer

Sun YB, Dong JC, Xia H, Yuan XM, Jiang KT

CLINICAL PRACTICE

- 1364 Value of dynamic monitoring of biochemical and coagulant indexes in disease evaluation and prognosis judgment of liver cancer with liver cirrhosis

Li SQ, Zhu XY, Zhang JJ

- 1371 Effect of live combined bifidobacterium, lactobacillus, and enterococcus powder plus lansoprazole on clinical symptoms and mental health in patients with peptic ulcer

Zhao ZY

Contents

World Chinese Journal of Digestology
Volume 26 Number 22 Aug 8, 2018

COVER

Editorial Board Member of *World Chinese Journal of Digestology*, De liang Liu, Professor, Chief Physician, Department of Gastroenterology, The Second Xiangya Hospital of Central South University, No.139 Renmin Middle Road, Furong District, Changsha 410011, Hunan Province, China

Indexed/Abstracted by

Chemical Abstracts, EMBASE/Excerpta Medica, Abstract Journals, Scopus, CNKI, and Superstar Journals Database.

RESPONSIBLE EDITORS FOR THIS ISSUE

Assistant Editor: *Xiang Li* Review Editor: *Li-Jun Cui* Electronic Editor: *Yan-Liang Zhang* English Language Editor: *Tian-Qi Wang* Editor-in-Charge: *Li-Jun Cui* Proof Editor: *Ya-Juan Ma* Layout Reviewer: *Lian-Sheng Ma*

Shijie Huaren Xiaohua Zazhi

Founded on January 15, 1993
Renamed on January 25, 1998
Publication date August 8, 2018

NAME OF JOURNAL

World Chinese Journal of Digestology

ISSN

ISSN 1009-3079 (print) ISSN 2219-2859 (online)

EDITOR-IN-CHIEF

Ying-Sheng Cheng, Professor, Department of Radiology, Sixth People's Hospital of Shanghai Jiaotong University, Shanghai 200233, China

Shuang-Suo Dang, Professor, Department of Infectious Diseases, the Second Affiliated Hospital of Medical School of Xi'an Jiaotong University, Xi'an 710004, Shaanxi Province, China

Xue-Liang Jiang, Professor, Department of Gastroenterology, General Hospital of Jinan Military Command of Chinese PLA, Jinan 250031, Shandong Province, China

Lian-Xin Liu, Professor, Department of General Surgery, the First Clinical Medical College of Harbin Medical University, Harbin 150001, Heilongjiang Province, China

Zhan-Ju Liu, Professor, Department of Gastroenterology, Shanghai Tenth People's Hospital, Tongji University, Shanghai 200072, China

Bin Lv, Professor, Department of Gastroenterology, the First Affiliated Hospital of Zhejiang Chinese Medical University, Hangzhou 310006, Zhejiang Province, China

Da-Lie Ma, Professor, Department of Pathology, Changhai Hospital, the Second Military Medical University of Chinese PLA, Shanghai 200433, China

Jun-Ping Wang, Professor, Department of Gastroenterology, People's Hospital of Shanxi, Taiyuan 030001, Shanxi Province, China

Xiao-Zhong Wang, Professor, Department of Gastroenterology, Union Hospital, Fujian Medical University, Fuzhou 350001, Fujian Province, China

Deng-Fu Yao, Professor, Clinical Research Center, Affiliated Hospital of Nantong University, Nantong 226001, Jiangsu Province, China

Zong-Ming Zhang, Professor, Department of General Surgery, Beijing Electric Power Hospital, Capital Medical University, Beijing 100073, China

EDITORIAL BOARD MEMBERS

All editorial board members resources online at <http://www.wjgnet.com/1009-3079/editorialboard.htm>

EDITORIAL OFFICE

Ya-Juan Ma, Director

World Chinese Journal of Digestology

Baishideng Publishing Group Inc
7901 Stoneridge Drive, Suite 501, Pleasanton, CA 94588, USA

Fax: +1-925-223-8242

Telephone: +1-925-223-8243

E-mail: wjcd@wjgnet.com

<http://www.wjgnet.com>

PUBLISHER

Baishideng Publishing Group Inc
7901 Stoneridge Drive, Suite 501, Pleasanton, CA 94588, USA

Fax: +1-925-223-8242

Telephone: +1-925-223-8243

E-mail: bpgoffice@wjgnet.com

<http://www.wjgnet.com>

PRODUCTION CENTER

Beijing Baishideng BioMed Scientific Co., Limited Room 903, Building D, Ocean International Center, No. 62 Dongsihuan Zhonglu, Chaoyang District, Beijing 100025, China
Telephone: +86-10-85381892
Fax: +86-10-85381893

PRINT SUBSCRIPTION

RMB 90.67 Yuan for each issue
RMB 3264 Yuan for one year

COPYRIGHT

© 2018 Baishideng Publishing Group Inc. Articles published by this open access journal are distributed under the terms of the Creative Commons Attribution Non-commercial License, which permits use, distribution, and reproduction in any medium, provided the original work is properly cited, the use is non commercial and is otherwise in compliance with the license.

SPECIAL STATEMENT

All articles published in journals owned by the Baishideng Publishing Group (BPG) represent the views and opinions of their authors, but not the views, opinions or policies of the BPG, except where otherwise explicitly indicated.

INSTRUCTIONS TO AUTHORS

Full instructions are available online at <http://www.wjgnet.com/1009-3079/Nav/36>. If you do not have web access, please contact the editorial office.

左右半结肠癌差异的研究进展

孙燕滨, 董俊成, 夏会, 袁学敏, 姜开通

孙燕滨, 青岛大学 山东省青岛市 266000

夏会, 袁学敏, 姜开通, 临沂市人民医院消化二科 山东省临沂市 276000

董俊成, 潍坊医学院 山东省潍坊市 261000

孙燕滨, 住院医师, 主要从事消化系统疾病的临床研究.

基金项目: 山东省自然科学基金项目, No. ZR2014HL067.

作者贡献分布: 本文综述由孙燕滨、董俊成及夏会共同完成; 袁学敏与姜开通审校.

通讯作者: 姜开通, 教授, 主任医师, 276000, 山东省临沂市兰山区解放路东段27号, 临沂市人民医院消化二科. kaitongjiang@163.com

收稿日期: 2018-06-20

修回日期: 2018-07-13

接受日期: 2018-07-22

在线出版日期: 2018-08-08

Difference between right and left colorectal cancer

Yan-Bin Sun, Jun-Cheng Dong, Hui Xia, Xue-Min Yuan, Kai-Tong Jiang

Yan-Bin Sun, Qingdao University, Qingdao 266000, Shandong Province, China

Hui Xia, Xue-Min Yuan, Kai-Tong Jiang, Department of Gastroenterology, Linyi People's Hospital, Linyi 276000, Shandong Province, China

Jun-Cheng Dong, Weifang Medical College, Weifang 261000, Shandong Province, China

Supported by: Shandong Natural Science Foundation, No. Zr2014hl067.

Correspondence to: Kai-Tong Jiang, Professor, Chief Physician, Department of Gastroenterology, Linyi People's Hospital, 27 East Jiefang Road, Lanshan District, Linyi 276000, Shandong Province, China. kaitongjiang@163.com

Received: 2018-06-20

Revised: 2018-07-13

Accepted: 2018-07-22

Published online: 2018-08-08

Abstract

Colorectal cancer (CRC) is one of the most common malignant tumors around the world. The incidence of CRC has increasing, but the prognosis is quite different. In recent years, the impact of tumor site on the treatment and prognosis of CRC has attracted widespread attention, and the research for differences between tumors provides a theoretical basis for precise treatment. This review aims to summarize the difference between right and left CRC.

© The Author(s) 2018. Published by Baishideng Publishing Group Inc. All rights reserved.

Key Words: Colorectal cancer; Tumor site; Precise treatment

Sun YB, Dong JC, Xia H, Yuan XM, Jiang KT. Difference between right and left colorectal cancer. *Shijie Huaren Xiaohua Zazhi* 2018; 26(22): 1360-1363 URL: <http://www.wjgnet.com/1009-3079/full/v26/i22/1360.htm> DOI: <http://dx.doi.org/10.11569/wcjd.v26.i22.1360>

摘要

结直肠癌(colorectal cancer, CRC)是世界上常见的恶性肿瘤之一, 其发病率逐年升高, 但预后差异较大. 近年来, 关于肿瘤部位对CRC的治疗和预后的影响, 引起人们广泛关注, 寻找肿瘤间的差异性, 为精准治疗提供理论基础, 是目前要努力的方向, 本文从CRC的危险因素、临床病理特征、预后、治疗等方面综述了左右半CRC的差异.

© The Author(s) 2018. Published by Baishideng Publishing Group Inc. All rights reserved.

关键词: 结直肠癌; 肿瘤位置; 精准治疗

核心提要: 本文综述了左右半结直肠癌的起源和危险因素、临床病理特征、治疗以及预后间的差异, 发现左半结肠癌、右半结肠癌和直肠癌可能是三种不同的疾病类型, 对于指导个体化治疗方式的研究具有深远意义。

孙燕滨, 董俊成, 夏会, 袁学敏, 姜开通. 左右半结直肠癌差异的研究进展. 世界华人消化杂志 2018; 26(22): 1360-1363 URL: <http://www.wjgnet.com/1009-3079/full/v26/i22/1360.htm> DOI: <http://dx.doi.org/10.11569/wjcd.v26.i22.1360>

0 引言

结直肠癌(colorectal cancer, CRC)是全球第三大常见的恶性肿瘤, 占有新发癌症病例的10.0%^[1], 是世界范围内癌症相关死亡的主要原因之一. 2015年中国癌症统计数据显示: 我国CRC的发病率、死亡率在全部恶性肿瘤中均位居第5位, 其中新发病例37.6万, 死亡病例19.1万^[2]. CRC的发病率呈逐年上升趋势, 这与遗传、环境以及饮食方式的改变有很大关系, 而且与大肠黏膜增生和腺瘤性息肉的癌变也密切相关^[3]. 随着靶向治疗的研究, CRC的治疗取得了很大进展, 但治疗效果和长期预后却不理想, 有人提出, 这可能与肿瘤的部位有关, 因此, 探讨不同位置CRC的差异尤为重要.

1 CRC的起源与危险因素

根据肿瘤的发生位置, CRC通常分为三种类型: 右半结肠癌(right-sided colon cancer, RSCC)、左半结肠癌(left-sided colon cancer, LSCC)和直肠癌, 每种类型约占30%^[4]. 左右半结肠癌通常以结肠脾曲为界, LSCC是指结肠脾曲至乙状结肠的肿瘤, RSCC是指回盲部至横结肠的肿瘤, 然而, 关于这三种类型应被视为同一疾病还是三种不同疾病的问题仍然存在争议. 早在1990年Bufill^[5]提出结直肠的胚胎起源不同, 以结肠脾曲为界, 右半结肠起源于胚胎的中肠, 左半结肠和直肠起源于后肠, 除了胚胎起源, 原发肿瘤的临床表现、组织学类型、分子特征、预后、转移方式以及治疗手段的选择也有所差异^[4]. 近30年来右半结肠癌的发病率不断上升, 而直肠癌发病率有所下降. 右半结肠癌在女性中更常见, 而直肠癌更常见于男性. 这些可能与环境因素有很大关系, 肥胖、多食加工产品和红肉的饮食习惯均能增加患腺瘤和癌症的风险, 代谢综合征是大肠癌的独立危险因素, 其与不合理的饮食、生活方式(如吸烟、饮酒)、缺乏运动密切相关, 还与体重增加、高甘油三酯血症、高血压以及糖尿病有关. 一些关于饮食、吸烟和体力活动等行为因素的研究^[6,7]发现, 这些因素对结肠癌的影响可能与直肠癌不同. 一项针对506488名参与者

的前瞻性队列分析发现^[8], 行为因素(饮食、吸烟、体育活动)和体重指数对增加结肠癌的风险较直肠癌更显著. 总体而言, 与直肠癌相比, 健康的生活方式似乎对预防结肠癌的作用更大.

2 CRC的临床病理特征

在临床表现方面, 由RSCC患者的隐匿性失血引起的缺铁性贫血较为普遍, 而便血和排便习惯改变是LSCC更常见的症状^[9]. 有数据显示^[10,11], 与LSCC和直肠癌相比, RSCC女性多见、年龄更大、肿瘤直径更大、分化更差、TNM分期晚、生存期短, 但Azzoni的研究^[12]却认为左右半结肠癌的临床因素无明显差异. CRC的组织学类型主要包括腺癌、黏液腺癌和印戒细胞癌等, 有报道称^[13] 右半结肠黏液腺癌和印戒细胞癌的发生率(45%)高于左半结肠或直肠(20%). 从分子角度来看, RSCC和LSCC是两个不同的实体, RSCC与缺陷错配修复(MMR)基因、KRAS和BRAF突变以及microRNA-31相关, 而LSCC与染色体不稳定性(CIN)、p53、NRAS、microRNA-146a、microRNA-147b和microRNA-1288关系密切^[14]. 然而, Gao等^[15]研究表明, MLH1, MSH2, MSH6, PMS2, β -Tubulin III, p53, Ki67和TOP II α 的表达水平以及KR = AS和BRAF基因突变在三种类型CRC中均无显著性差异. Frattini等^[16] 研究表明, 结肠癌和直肠癌之间KRAS突变和APC突变存在显著差异. 多项研究报道^[17-19], RSCC和LSCC之间p53基因突变和蛋白表达存在显著差异, 但也有研究显示p53蛋白表达与肿瘤位置之间没有显著关联^[20]. 所以, 不同位置CRC患者是否有不同的基因表达仍在争论中.

3 预后

对于肿瘤位置与CRC预后的关系, 尚无统一意见. 一项Meta分析^[21]纳入了66篇研究, 对1437846名CRC患者的总生存数据进行分析表明, 与右侧相比, 左半结肠癌患者死亡率降低19%, 并且认为原发性肿瘤的位置在决定结肠癌预后方面起着关键作用. 尽管多个研究报道了不同位置的CRC患者的流行病学、临床表现、分子机制等有所不同, 但尚不清楚这些差异能否转化为临床上有意义的预后差异. Weiss等^[11]通过调整多种影响预后的因素后, 发现左右半CRC患者的5年总生存率(OS)无显著差异, 但与肿瘤分期有关, I期患者中左右半CRC的OS无明显差异, 而II期患者中左侧死亡率更高, III期患者中右侧死亡率高于左侧. Karim的研究结果与以上相同. 肿瘤分期和分化是评价肿瘤预后的常用指标, 分期高和分化差是预后不良的表现, 但CRC的预后与位置和分期的关系机制尚不清楚. Ki67是一种核抗原, 它在

从细胞周期的G1期到M期的增殖细胞中表达,能够反映肿瘤细胞增殖活性,在许多恶性肿瘤类型中,包括内分泌肿瘤、胃肠道间质瘤、头颈部癌、前列腺癌和乳腺癌,高Ki67指数均与患者的预后不良有关^[22-24]。但在Nathaniel的研究中,Ki67高表达是CRC独立的预后良好的指标^[25]。因此,关于Ki67与恶性肿瘤预后的关系尚不明确,是否与CRC的位置差异有关值得进一步研究。

4 治疗

CRC的治疗手段主要包括手术切除,辅助放化疗以及免疫靶向治疗。近年来,靶向治疗的相关研究逐渐深入,但CRC的抗血管生成的治疗效果一直存在争议。血管内皮细胞已经成为抗血管生成治疗的靶点,抗VEGF的单克隆抗体-贝伐单抗可以阻断血管生成,并有研究称^[26]能够提高IV期CRC患者的生存率,但也有动物实验研究表明^[27],抗血管生成药物可能导致肿瘤细胞的“血管侵袭开关”的开启,从而使肿瘤转移增加和小鼠的寿命缩短。结肠癌和直肠癌是否应该考虑不同的靶向治疗尚不清楚。众所周知的CRC基因(不仅是KRAS,包括最近鉴定的基因如PIK3CA或FBXW7)的整体突变模式在结肠和直肠肿瘤之间没有明显差异^[28],直肠癌的内在生物学和相应药物靶点可能与左半结肠癌非常相似。然而,左半和右半结肠癌的分子特征有很大差异,其差异包括BRAF突变状态和EGFR通路激活状态,这可能导致靶向药物(如EGFR和BRAF抑制剂)的治疗存在差异^[29]。一项纳入146例IV期结肠癌患者的实验研究(AIO KRK-0104)^[30],发现原发肿瘤部位与KRAS基因突变型共同作用影响患者的预后,KRAS基因野生型的左半结肠癌患者预后明显优于右半结肠癌患者,因此认为肿瘤原发在左半结肠是西妥昔单抗治疗有效的预测因素。肿瘤异质性可能是靶向治疗效果差异大的主要原因。

5 结论

越来越多的证据表明,CRC不是一种统一的疾病类型,而是由一系列分子异质性疾病组成,这些疾病的特征是一系列基因组和表观遗传改变,这种异质性减缓了分子靶向治疗作为精准医学形式的发展,并能解释患者预后和治疗效果的巨大差异,强调了开发精准的预后生物标志物的必要性。目前关于不同部位结肠癌的差异仍存在很多争论,希望在以后的研究中能够多关注肿瘤的个体差异,在精准医疗的大背景下,根据肿瘤的基因、病理特征、免疫因素、预后指标等提出个体化的治疗方案,将会是未来治疗的大方向。

6 参考文献

1 Torre LA, Bray F, Siegel RL, Ferlay J, Lortet-Tieulent J, Jemal A.

Global cancer statistics, 2012. *CA Cancer J Clin* 2015; 65: 87-108 [PMID: 25651787 DOI: 10.3322/caac.21262]

2 国家卫生计生委医政医管局. 中国结直肠癌诊疗规范(2017年版). 中华胃肠外科杂志 2018; 1: 92-106

3 Rex DK, Ahnen DJ, Baron JA, Batts KP, Burke CA, Burt RW, Goldblum JR, Guillem JG, Kahi CJ, Kalady MF, O'Brien MJ, Odze RD, Ogino S, Parry S, Snover DC, Torlakovic EE, Wise PE, Young J, Church J. Serrated lesions of the colorectum: review and recommendations from an expert panel. *Am J Gastroenterol* 2012; 107: 1315-1329; quiz 1314, 1330 [PMID: 22710576 DOI: 10.1038/ajg.2012.161]

4 Tamas K, Walenkamp AM, de Vries EG, van Vugt MA, Beets-Tan RG, van Etten B, de Groot DJ, Hospers GA. Rectal and colon cancer: Not just a different anatomic site. *Cancer Treat Rev* 2015; 41: 671-679 [PMID: 26145760 DOI: 10.1016/j.ctrv.2015.06.007]

5 Bufill JA. Colorectal cancer: evidence for distinct genetic categories based on proximal or distal tumor location. *Ann Intern Med* 1990; 113: 779-788 [PMID: 2240880 DOI: 10.7326/0003-4819-113-10-779]

6 Samad AK, Taylor RS, Marshall T, Chapman MA. A meta-analysis of the association of physical activity with reduced risk of colorectal cancer. *Colorectal Dis* 2005; 7: 204-213 [PMID: 15859955 DOI: 10.1111/j.1463-1318.2005.00747.x]

7 Wolin KY, Yan Y, Colditz GA, Lee IM. Physical activity and colon cancer prevention: a meta-analysis. *Br J Cancer* 2009; 100: 611-616 [PMID: 19209175 DOI: 10.1038/sj.bjc.6604917]

8 Doubeni CA, Major JM, Laiyemo AO, Schootman M, Zaubner AG, Hollenbeck AR, Sinha R, Allison J. Contribution of behavioral risk factors and obesity to socioeconomic differences in colorectal cancer incidence. *J Natl Cancer Inst* 2012; 104: 1353-1362 [PMID: 22952311 DOI: 10.1093/jnci/djs346]

9 Saidi HS, Karuri D, Nyaim EO. Correlation of clinical data, anatomical site and disease stage in colorectal cancer. *East Afr Med J* 2008; 85: 259-262 [PMID: 18817021]

10 Nawa T, Kato J, Kawamoto H, Okada H, Yamamoto H, Kohno H, Endo H, Shiratori Y. Differences between right- and left-sided colon cancer in patient characteristics, cancer morphology and histology. *J Gastroenterol Hepatol* 2008; 23: 418-423 [PMID: 17532785 DOI: 10.1111/j.1440-1746.2007.04923.x]

11 Weiss JM, Pfau PR, O'Connor ES, King J, LoConte N, Kennedy G, Smith MA. Mortality by stage for right- versus left-sided colon cancer: analysis of surveillance, epidemiology, and end results-Medicare data. *J Clin Oncol* 2011; 29: 4401-4409 [PMID: 21969498 DOI: 10.1200/JCO.2011.36.4414]

12 Azzoni C, Bottarelli L, Campanini N, Di Cola G, Bader G, Mazzeo A, Salvemini C, Morari S, Di Mauro D, Donadei E, Roncoroni L, Bordini C, Sarli L. Distinct molecular patterns based on proximal and distal sporadic colorectal cancer: arguments for different mechanisms in the tumorigenesis. *Int J Colorectal Dis* 2007; 22: 115-126 [PMID: 17021745 DOI: 10.1007/s00384-006-0093-x]

13 Hugen N, van de Velde CJ, de Wilt JH, Nagtegaal ID. Metastatic pattern in colorectal cancer is strongly influenced by histological subtype. *Ann Oncol* 2014; 25: 651-657 [PMID: 24504447 DOI: 10.1093/annonc/mdt591]

14 Shen H, Yang J, Huang Q, Jiang MJ, Tan YN, Fu JF, Zhu LZ, Fang XF, Yuan Y. Different treatment strategies and molecular features between right-sided and left-sided colon cancers. *World J Gastroenterol* 2015; 21: 6470-6478 [PMID: 26074686 DOI: 10.3748/wjg.v21.i21.6470]

15 Gao XH, Yu GY, Gong HF, Liu LJ, Xu Y, Hao LQ, Liu P, Liu ZH, Bai CG, Zhang W. Differences of protein expression profiles, KRAS and BRAF mutation, and prognosis in right-sided colon, left-sided colon and rectal cancer. *Sci Rep* 2017; 7:

- 7882 [PMID: 28801584 DOI: 10.1038/s41598-017-08413-z]
- 16 Frattini M, Balestra D, Suardi S, Oggionni M, Alberici P, Radice P, Costa A, Daidone MG, Leo E, Pilotti S, Bertario L, Pierotti MA. Different genetic features associated with colon and rectal carcinogenesis. *Clin Cancer Res* 2004; 10: 4015-4021 [PMID: 15217933 DOI: 10.1158/1078-0432.CCR-04-0031]
 - 17 Leonart ME, García-Foncillas J, Sánchez-Prieto R, Martín P, Moreno A, Salas C, Ramón y Cajal S. Microsatellite instability and p53 mutations in sporadic right and left colon carcinoma: different clinical and molecular implications. *Cancer* 1998; 83: 889-895 [PMID: 9731891]
 - 18 Rambau PF, Odida M, Wabinga H. p53 expression in colorectal carcinoma in relation to histopathological features in Ugandan patients. *Afr Health Sci* 2008; 8: 234-238 [PMID: 20589130]
 - 19 Paluszkiwicz P, Berbec H, Pawłowska-Wakowicz B, Cybulski M, Paszkowska A. p53 protein accumulation in colorectal cancer tissue has prognostic value only in left-sided colon tumours. *Cancer Detect Prev* 2004; 28: 252-259 [PMID: 15350628 DOI: 10.1016/j.cdp.2004.05.001]
 - 20 Ghavam-Nasiri MR, Rezaei E, Ghafarzadegan K, Seilanian-Toosi M, Malekifard H. Expression of p53 in colorectal carcinoma: correlation with clinicopathologic features. *Arch Iran Med* 2007; 10: 38-42 [PMID: 17198452 DOI: 07101/AIM.0010]
 - 21 Petrelli F, Tomasello G, Borgonovo K, Ghidini M, Turati L, Dallera P, Passalacqua R, Sgroi G, Barni S. Prognostic Survival Associated With Left-Sided vs Right-Sided Colon Cancer: A Systematic Review and Meta-analysis. *JAMA Oncol* 2017; 3: 211-219 [PMID: 27787550 DOI: 10.1001/jamaoncol.2016.4227]
 - 22 Salminen E, Palmu S, Vahlberg T, Roberts PJ, Söderström KO. Increased proliferation activity measured by immunoreactive Ki67 is associated with survival improvement in rectal/recto sigmoid cancer. *World J Gastroenterol* 2005; 11: 3245-3249 [PMID: 15929175]
 - 23 Reimers MS, Zeestraten EC, van Alphen TC, Dekker JW, Putter H, Saadatmand S, Liefers GJ, van de Velde CJ, Kuppen PJ. Combined analysis of biomarkers of proliferation and apoptosis in colon cancer: an immunohistochemistry-based study using tissue microarray. *Int J Colorectal Dis* 2014; 29: 1043-1052 [PMID: 24950792 DOI: 10.1007/s00384-014-1930-y]
 - 24 Palmqvist R, Sellberg P, Oberg A, Tavelin B, Rutegård JN, Stenling R. Low tumour cell proliferation at the invasive margin is associated with a poor prognosis in Dukes' stage B colorectal cancers. *Br J Cancer* 1999; 79: 577-581 [PMID: 10027333 DOI: 10.1038/sj.bjc.6690091]
 - 25 Valle Sanchiz J, Menéndez González JJ, Ascorve Domínguez A. [Effects of alpha-ketoglutarate of imidazole on fentanyl-induced bradycardia-bradypnoea syndrome. Experimental study (author's transl). *Rev Esp Anestesiol Reanim* 1982; 29: 3-7 [PMID: 6281861 DOI: 10.1136/jclinpath-2015-202985]
 - 26 Pasquier E, Kavallaris M, André N. Metronomic chemotherapy: new rationale for new directions. *Nat Rev Clin Oncol* 2010; 7: 455-465 [PMID: 20531380 DOI: 10.1038/nrclinonc.2010.82]
 - 27 Grady WM, Pritchard CC. Molecular alterations and biomarkers in colorectal cancer. *Toxicol Pathol* 2014; 42: 124-139 [PMID: 24178577 DOI: 10.1177/0192623313505155]
 - 28 Cancer Genome Atlas Network. Comprehensive molecular characterization of human colon and rectal cancer. *Nature* 2012; 487: 330-337 [PMID: 22810696 DOI: 10.1038/nature11252]
 - 29 Prahallad A, Sun C, Huang S, Di Nicolantonio F, Salazar R, Zecchin D, Beijersbergen RL, Bardelli A, Bernards R. Unresponsiveness of colon cancer to BRAF(V600E) inhibition through feedback activation of EGFR. *Nature* 2012; 483: 100-103 [PMID: 22281684 DOI: 10.1038/nature10868]
 - 30 Von Einem JC, Heinemann V, von Weikersthal LF, Vehling-Kaiser U, Stauch M, Hass HG, Decker T, Klein S, Held S, Jung A. Left-sided primary tumors are associated with favorable prognosis in patients with KRAS codon 12/13 wild-type metastatic colorectal cancer treated with cetuximab plus chemotherapy: an analysis of the AIO KRK-0104 trial. *J CANCER RES CLIN* 2014; 140: 1607-1614 [PMID: 24816724 DOI:10.1007/s00432-014-1678-3]

编辑: 崔丽君 电编: 张砚梁





Published by **Baishideng Publishing Group Inc**
7901 Stoneridge Drive, Suite 501, Pleasanton,
CA 94588, USA
Fax: +1-925-223-8242
Telephone: +1-925-223-8243
E-mail: bpgoffice@wjgnet.com
<http://www.wjgnet.com>



ISSN 1009-3079

