

# 胃癌根治术后患者焦虑抑郁的研究进展

张 慧\*, 张剑青

延安大学, 陕西 延安

收稿日期: 2022年7月3日; 录用日期: 2022年8月1日; 发布日期: 2022年8月8日

## 摘 要

胃癌根治术后患者焦虑、抑郁发生率较高, 极大程度地影响了他们的治疗、预后和生活质量。在“生物-心理学-社会”的现代新医学模式下, 单一的生物治疗模式与胃癌的诊断和治疗目标不匹配。应更加关注癌症患者的心理状态, 并积极实施心理干预, 改善癌症患者的疗效, 促进康复, 提高生活质量。本文就胃癌根治术后患者的焦虑、抑郁现状的流行病学资料、发病机制及其相关影响因素和心理干预作一综述。

## 关键词

胃癌, 根治术, 焦虑, 抑郁

# Research Progress of Anxiety and Depression in Patients after Radical Gastrectomy for Gastric Cancer

Hui Zhang\*, Jianqing Zhang

Yan'an University, Yan'an Shaanxi

Received: Jul. 3<sup>rd</sup>, 2022; accepted: Aug. 1<sup>st</sup>, 2022; published: Aug. 8<sup>th</sup>, 2022

## Abstract

The incidence of anxiety and depression in patients after radical gastrectomy for gastric cancer is high, which greatly affects their treatment, prognosis and quality of life. Under the new modern medical model of “biology-psychology-society”, a single biological treatment model does not match the diagnosis and treatment goals of gastric cancer. More attention should be paid to the mental health of cancer patients, so that patients can maintain a good mood, so as to achieve the improvement of prognosis, quality of life and survival rate of patients with cancer patients. The pur-

\*通讯作者。

pose of this paper is to summarize the current situation of anxiety and depression in patients after radical gastrectomy for gastric cancer, and to lay a foundation for further related work.

## Keywords

Gastric Cancer, Radical Surgery, Anxiety, Depression

Copyright © 2022 by author(s) and Hans Publishers Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

## 1. 引言

胃癌是世界范围内极常见的恶性肿瘤。手术切除是目前可能治愈胃癌的唯一方法,手术方式主要是:开放性根治性胃切除术、腹腔镜根治性胃切除术和达芬奇机器人辅助根治性胃切除术。据2020年世界卫生组织全球肿瘤流行病学统计数据,全球每年新发胃癌病例约108.9万,约占全球已确诊消化器官癌症病例的5.6%,同期胃癌死亡患者约76.9万例,占比约为7.7% [1]。在中国,2016年预计全国新增胃癌病例数约39.7万,粗发病率约为28.68/10万,因胃癌死亡人数约28.9万,死亡率约为20.87/10万,男性胃癌死亡率次于肺癌、肝癌,女性病例中仅次于肺癌。但近年来胃癌的发病率和死亡率均有所下降,并呈现农村化、老龄化的特点[2]。

1994年日本Kitano等[3]的研究显示可在腹腔镜下行胃癌根治术,之后在腹腔镜胃癌手术的不断进展及其治疗早期胃癌的良好疗效状态下,腹腔镜胃癌手术的指征从早期胃癌扩展至进展期胃癌。1997年Goh [4]等首次应用腹腔镜胃癌D2根治术治疗进展期胃癌患者。此后,东亚国家,包括中国,采用标准D2根治术+术后辅助化疗的方式治疗进展期胃癌[5] [6],西方国家则倾向于选择术前新辅助化疗+D1根治术+术后辅助放疗的方式[7]。2002年Hashizume等[8]报道了全球首例达芬奇机器人辅助胃癌根治术。我国首例达芬奇机器人胃癌根治术由余佩武[9]等人于2010年出色完成。目前普通外科等领域均广泛使用达芬奇机器人[10]。

据刘平等[11]的报道,术后焦虑抑郁逐渐恶化,与预后不良有关,其主要危险因素包括女性、单身/离婚/丧偶结婚状态、糖尿病、高脂血症、肿瘤面积大、TNM分期高等。在胃癌患者中,抑郁和焦虑的发生和发展极大地影响了他们的治疗、预后和生活质量,且与癌症的发病率和死亡率息息相关[12]。胃癌的治疗过程中,不仅仅需要观察患者心理状态,同时应加强对患者异常行为举止的关注,以便及早发现;此外,应及时给予合理的心理护理干预,以改善患者的不良情绪,从而避免对患者造成更多不利影响。在“生物-心理学-社会”的现代新医学模式下[13],单一的生物治疗模式与胃癌的诊断和治疗目标不匹配。应更加关注癌症患者的心理状态,并积极实施心理干预,改善癌症患者的疗效,促进康复,提高生活质量[14]。本文就胃癌根治术后患者的焦虑、抑郁现状的流行病学资料、发病机制及其相关影响因素和心理干预作一综述。

## 2. 焦虑抑郁的症状、流行病学资料及发病机制

焦虑和抑郁是严重的和反复发作的心理障碍[15]。焦虑的特征是持续和过度不愉快的威胁或潜在伤害感,通常伴有忧虑,担忧,注意力不集中,肌肉紧张,心悸和出汗[16]。抑郁症的特点是情绪低落,对爱好和活动失去兴趣或乐趣,精力下降,难以集中注意力或做出决定,食欲和睡眠障碍,精神运动障碍和

自杀企图[17]。据报道,胃癌患者焦虑和抑郁的发生率高达 37% [18],其中胃癌患者焦虑的合并患病率为 18.7% [19],抑郁的合并患病率为 7% [20]。韩丽娟[21]等人认为胃癌患者术后的焦虑、抑郁患病率与术前相比均有所增加,分别是 42.5% vs. 13.5%, 33.5% vs. 10.0%。作用机制考虑是焦虑和抑郁可以通过下丘脑-垂体-肾上腺轴过度释放激素(如儿茶酚胺)来损害人体免疫力[22]。同时,这将减少淋巴细胞的数量和百分比,并显著增加嗜中性粒细胞的数量和百分比。同时 Monique B. Nilsson 等人[23]赞同该理论,他们发现在癌细胞的生长及其对酪氨酸激酶抑制剂(治疗非小细胞肺癌的药物)产生耐药性的过程中,去甲肾上腺素和肾上腺素均有促进作用。此外,心理压力与免疫功能有关,良好的心理护理可以在一定程度上缓解癌症患者的免疫损伤,提高 HRQoL [24]。

### 3. 胃癌根治术后患者焦虑、抑郁的影响因素

目前研究发现多种因素均可导致胃癌根治术后焦虑、抑郁的出现,但结论并不统一,且未制定出风险评估量表或模型,一定程度上阻碍了焦虑、抑郁的早发现。通过对相关因素的了解,可及早针对高危人群制定相应的干预措施。

1) 年龄: 研究显示年龄  $\geq 60$  岁的患者更容易产生焦虑和抑郁,可能的原因是老年患者的体力恢复和适应能力较弱,同时免疫能力和身体基础较差[25]。而赵志芹等人的研究认为年龄与胃癌患者术后发生焦虑、抑郁无关[26]。产生在这一现象可能的原因是不良情绪与年龄相关的不同社会背景有关,认为癌症对个体的影响是独特的,并可能导致不一致的表现。

2) 性别: Kim, Gun Min [27]等人认为女性胃癌患者更容易产生焦虑、抑郁的情绪。其原因可能是与男性癌症患者相比,女性癌症患者较敏感多疑,情绪支持水平较低,情感支持较少与焦虑/抑郁风险较高。

3) 家庭收入、社会支持及癌症沟通: 有充分的证据表明,一般来说,低收入家庭中的患者经历抑郁和焦虑的可能性更高[28]。对于癌症患者来说,由于他们的医疗状况,更容易受到外部刺激,特别是缺乏货币资源可能会带来严重的压力。另外,患者的焦虑由收入和社会支持解释,社会支持较少的患者感到更加焦虑[29]。另一方面,据中国的研究报告,较低的家庭收入与胃癌幸存者对癌症复发的恐惧(FCR)水平较高有关[30]。而韩国 Shin, Jinyoung 等[31]提出了不同的观点,认为较高的 FCR 水平与较低的社会支持水平呈负相关,与经济困难呈正相关。这种差异可能是由于中国研究(67.3%的研究对象少于 2 年)和韩国的研究(癌症诊断与研究参与之间的平均时间间隔: 7.3 年)之间研究对象癌症诊断后的时间分布不同,因为 FCR 与系统综述报告的诊断时间呈负相关[32]。此外,研究显示,应积极与癌症患者公开讨论疾病方面的问题,不仅是癌症患者家庭成员之间的沟通,也包括与医疗专业人员的沟通[33]。家庭成员越是避免癌症交流,患者的焦虑水平越高;患者病情越严重,其家人越避免癌症沟通,他们与家人的关系越不密切,患者的抑郁水平越高。研究结果表明,公开讨论疾病、状态、预后和可用治疗方案有助于减少患者的焦虑和抑郁[34]。

4) 手术方式: 据文献报道[35],相较于姑息性手术,胃癌根治性手术患者的心理和生理压力较低,其焦虑、抑郁的程度较轻。另外,由于开放性手术对患者造成的创伤较大、术后并发症较多、患者恢复较慢,继而患者的不良情绪较明显。而腹腔镜手术术中视野足,术者观察角度广,可减少周围其他脏器的影响,且患者术后痛感轻,恢复快,有效缓解患者的焦虑抑郁情绪。而相较于腹腔镜近端胃切除术,腹腔镜全胃切除术术后患者的焦虑、抑郁情绪较低,其原因可能是其术后反流发生率较低[36]。与开放根治性胃切除术相比,达芬奇机器人辅助根治性胃切除术可以缓解抑郁和焦虑[37],其原因是达芬奇机器人辅助根治性胃切除术治疗胃癌通过减少皮肤切口和创伤来减轻患者的术后疼痛,从而缓解他们的心理压力[38]。另外,达芬奇机器人辅助根治性手术创伤小,出血量少,炎症因子量小,恢复快,术后焦虑和抑郁的程度较低。但目前国内关于胃癌根治性三种手术术后患者不良情绪的对比报道相对较少,这一方面

有待于进一步的研究。

5) 疼痛: 研究表明, 疼痛与发生抑郁的风险增加相关[39]。可能的原因是在术后长期癌性疼痛的影响下, 患者甚至不能从事正常的日常活动, 继而产生烦躁、无用感等负性情绪。

6) 单身/离婚/丧偶结婚状态: 研究显示, 没有亲密伴侣关系的患者比有亲密关系的患者抑郁程度更高, 抑郁风险增加 4 倍[40], 这可能的原意是单身/离婚/丧偶结婚状态与缺乏配偶的照顾、精神与情感等方面支持有关; 但石静静[41]提出了不同观点, 认为单身组患者抑郁得分较低, 可能是因为单身患者没有太多来自于家庭的心理负担。

7) 肿瘤大小和高 TNM 分期: 更严重的肿瘤状况意味着胃切除术中切除的更大部分, 这意味着更多的胃功能障碍。因此, 肿瘤大小较大、TNM 分期高的胃癌患者在术后可能出现较多的胃部疾病, 增加了术后焦虑/抑郁[11] [42]。

8) 辅助化疗: 辅助化疗可能会带来一些副作用, 包括疼痛, 恶心和呕吐, 直接降低生活质量, 从而增加胃癌患者的术后焦虑/抑郁[43] [44]。

9) 糖尿病和高脂血症: 糖尿病和高脂血症的历史意味着长期的代谢功能障碍, 这可能会增加术后恢复的难度。因此, 术后恢复不良增加了胃癌患者术后焦虑/抑郁[45]。

#### 4. 胃癌根治术后的心理干预

心理干预[46]是指在心理学理论指导下有计划、有步骤地对一定对象的心理活动、个性特征或心理问题施加影响, 使之发生指向预期目标变化的过程。国际小组已经表明, 筛查和治疗抑郁症应纳入癌症治疗[47]焦虑和抑郁的评估主要基于图表诊断, 主要的问卷是 HADS、HAMD、SDS、SAS、SCL-90、QLQ-STO22, 这可能容易出现漏报。这些研究的患病率可能低估了先前抑郁症状的真实维度, 因为一些研究仅在给予癌前抗抑郁药物治疗时才考虑抑郁症。具体的干预措施根据干预内容分为: 认知干预、护患关系干预、休息与活动干预、放松指导; 根据干预对象分为: 患者干预、照护者干预、医护干预; 根据干预形式分为宣教性干预、示范性干预、个体干预、团体干预。但目前尚未有统一的焦虑、抑郁的筛查、评估方案以及心理干预操作指南, 这些问题亟待解决。

随着网络和电子设备的发展, 心理干预的形式不仅仅局限于线下, 互联网+的模式也逐渐开始在国内外普及[48], 但他们不是随机对照实验。

#### 5. 小结与展望

合理、有效的评估量表是贯穿于医务工作者为患者实施治疗与护理工作始终的基本要素。目前, 用于评估癌症患者的抑郁情况的量表包括抑郁自评量表, 该量表含有 20 个项目, 分为 4 级评分, 由 W. K. Zung 于 1965 年编制, 使用简便, 并能相当直观地反映抑郁患者的主观感受及其在治疗中的变化。汉密尔顿抑郁量表是 1960 年由 Hamilton 编制, 此量表有 17 项、21 项和 24 项等 3 种版本, 是由经过培训的两名评定者采用交谈与观察的方式对患者进行 HAMD 联合检查, 检查结束后, 两名评定者分别独立评分。该量表通过治疗前后的评分可评价病情的严重程度及治疗效果, 在临床上具有良好的应用信度, 应用最为普遍。贝克抑郁自评量表包括 21 组项目, 每组有 4 句陈述, 每句之前标有的阿拉伯数字为等级分。可根据一周来的感觉, 评估自己是否有抑郁及其程度。焦虑自评量表、广泛性焦虑自评量表、汉密尔顿焦虑量表等用于评估其焦虑情况; 可同时评估焦虑、抑郁的量表包括医院焦虑抑郁量表、90 项症状自评量表、明尼苏达多项人格测验。上述量表的中文版本已经检验, 信效度均较高。但对胃癌根治术后患者不良情绪变化过程、相关影响因素等尚无统一论, 这个问题也亟待解决。然而没有任何一种心理护理方式适用于所有胃癌根治术后的患者, 且都有一定的局限性。目前国内外学者积极探索, 以盼摸索出一种互联网与多种护理模式并存的心理护理方式。

现如今, 肿瘤心理学在中国尚在起步阶段, 极其缺乏参与临床工作的心理咨询师, 没有专业的临床心理护理团队, 加之大众的病耻感, 未来对胃癌患者从始至终的心理管理道阻且长。

## 参考文献

- [1] Ferlay, J., Ervik, M., Lam, F., Colombet, M., Mery, L., Piñeros, M., Znaor, A., Soerjomataram, I., Bray, F. 全球癌症观察站: 今日癌症[Z]. 里昂: 国际癌症研究机构, 2020. <https://gco.iarc.fr/today>
- [2] Zheng, R., Zhang, S., Zeng, H., Wang, S., Sun, K., Chen, R., Li, L. and Wei, W. (2022) Cancer Incidence and Mortality in China, 2016. *Journal of the National Cancer Center*, **2**, 1-9. <https://doi.org/10.1016/j.jncc.2022.02.002>
- [3] Kitano, S., Iso, Y., Moriyama, M., et al. (1994) Laparoscopy-Assisted Billroth I Gastrectomy. *Surgical Laparoscopy Endoscopy & Percutaneous Techniques*, **4**, 146-148.
- [4] Goh, P.M., Khan, A.Z., Jimmy, B.Y., et al. (2001) Early Experience with Laparoscopic Radical Gastrectomy for Advanced Gastric Cancer. *Surgical Laparoscopy Endoscopy & Percutaneous Techniques*, **11**, 83-87. <https://doi.org/10.1097/00129689-200104000-00003>
- [5] Japanese Gastric Cancer Association (2017) Japanese Gastric Cancer Treatment Guidelines 2014 (Ver. 4). *Gastric Cancer*, **20**, 1-19. <https://doi.org/10.1007/s10120-016-0622-4>
- [6] Japanese Gastric Cancer Association (2020) Japanese Gastric Cancer Treatment Guidelines 2018 (5th Edition). *Gastric Cancer*, **24**, 1-21. <https://doi.org/10.1007/s10120-020-01042-y>
- [7] Ajani, J.A., D'Amico, T.A., Bentrem, D.J., et al. (2020) Gastric Cancer, Version 2.2020, NCCN Clinical Practice Guidelines in Oncology. *Journal of the National Comprehensive Cancer Network*, **20**, 167-192. <https://doi.org/10.6004/jnccn.2022.0008>
- [8] Hashizume, M., Shimada, M., Tomikawa, M., et al. (2002) Early Experiences of Endoscopic Procedures in General Surgery Assisted by a Computer Enhanced Surgical System. *Surgical Endoscopy*, **16**, 1187-1191. <https://doi.org/10.1007/s004640080154>
- [9] 余佩武, 唐波. 达芬奇机器人辅助胃癌根治术的相关问题探讨[J]. 中华普外科手术学杂志: 电子版, 2010, 4(3): 250-253. <https://doi.org/10.3969/cma.j.issn.1674-3946.2010.03.005>
- [10] Shen, W., Xi, H., Wei, B., et al. (2016) Robotic versus Laparoscopic Gastrectomy for Gastric Cancer: Comparison of Short-Term Surgical Outcomes. *Surgical Endoscopy*, **30**, 574-580. <https://doi.org/10.1007/s00464-015-4241-7>
- [11] Liu, P. and Wang, Z. (2022) Postoperative Anxiety and Depression in Surgical Gastric Cancer Patients: Their Longitudinal Change, Risk Factors, and Correlation with Survival. *Medicine*, **101**, e28765. <https://doi.org/10.1097/MD.00000000000028765>
- [12] Ormel, J., Kessler, R.C. and Schoevers, R. (2019) Depression: More Treatment But No Drop in Prevalence: How Effective Is Treatment? And Can We Do Better? *Current Opinion in Psychiatry*, **32**, 348-354.
- [13] Song, P., Wu, Q. and Huang, Y. (2010) Multidisciplinary Team and Team Oncology Medicine Research and Development in China. *BioScience Trends*, **4**, 151-160.
- [14] Pinquart, M. and Duberstein, P.R. (2010) Depression and Cancer Mortality: A Meta-Analysis. *Psychological Medicine*, **40**, 1797-1810. <https://doi.org/10.1017/S0033291709992285>
- [15] Yang, Y.L., Liu, L., Wang, Y., et al. (2013) The Prevalence of Depression and Anxiety among Chinese Adults with Cancer: A Systematic Review and Meta-Analysis. *BMC Cancer*, **13**, Article No. 393. <https://doi.org/10.1186/1471-2407-13-393>
- [16] Stark, D.P. and House, A. (2000) Anxiety in Cancer Patients. *British Journal of Cancer*, **83**, 1261-1267. <https://doi.org/10.1054/bjoc.2000.1405>
- [17] Ghoneim, M.M. and O'Hara, M.W. (2016) Depression and Postoperative Complications: An Overview. *BMC Surgery*, **16**, Article No. 5.
- [18] Arrieta, O., Angulo, L.P., Nuñez-Valencia, C., Dorantes-Gallareta, Y., Macedo, E.O., Martínez-López, D., et al. (2013) Association of Depression and Anxiety on Quality of Life, Treatment Adherence, and Prognosis in Patients with Advanced Non-Small Cell Lung Cancer. *Annals of Surgical Oncology*, **20**, 1941-1948. <https://doi.org/10.1245/s10434-012-2793-5>
- [19] Zamani, M. and Alizadeh-Tabari, S. (2021) Anxiety and Depression Prevalence in Digestive Cancers: A Systematic Review and Meta-Analysis. *BMJ Supportive & Palliative Care*. <https://spcare.bmj.com/content/early/2021/08/20/bmjspcare-2021-003275.long>
- [20] Kouhestani, M., Ahmadi Gharaei, H., Fararouei, M., Hosienpour, G.H., Ghaiasvand, R. and Dianatinasab, M. (2020) Global and Regional Geographical Prevalence of Depression in Gastric Cancer: A Systematic Review and Meta-Analysis.

- BMJ Supportive & Palliative Care*. <https://spcare.bmj.com/content/early/2020/05/20/bmjspcare-2019-002050.long>
- [21] Han, L.J. (2020) Prevalence, Risk Factors and Prognostic Role of Anxiety and Depression in Surgical Gastric Cancer Patients. *Translational Cancer Research*, **9**, 1371-1383. <https://doi.org/10.21037/tcr.2020.01.11>
- [22] Oliveira, M.D., Soares de Lima, T.A., Ribeiro Azevedo, L., et al. (2014) Proinflammatory Cytokines Correlate with Depression And Anxiety in Colorectal Cancer Patients. *BioMed Research International*, **2014**, Article ID: 739650. <https://doi.org/10.1155/2014/739650>
- [23] Nilsson, M.B., et al. (2017) Stress Hormones Promote EGFR Inhibitor Resistance in NSCLC: Implications for Combinations with  $\beta$ -Blockers. *Science Translational Medicine*, **9**, eaao4307. <https://doi.org/10.1126/scitranslmed.aao4307>
- [24] Dhabhar, F.S., Miller, A.H., McEwen, B.S., et al. (1995) Effects of Stress on Immune Cell Distribution. Dynamics and Hormonal Mechanisms. *The Journal of Immunology*, **154**, 5511-5527.
- [25] Zigmond, A.S. and Snaith, R.P. (1983) The Hospital Anxiety and Depression Scale. *Acta Psychiatrica Scandinavica*, **67**, 361-370. <https://doi.org/10.1111/j.1600-0447.1983.tb09716.x>
- [26] 赵志芹. 常见消化道恶性肿瘤相关焦虑、抑郁的危险因素研究[D]: [硕士学位论文]. 石家庄: 河北医科大学, 2016.
- [27] Kim, G.M., et al. (2017) Prevalence and Prognostic Implications of Psychological Distress in Patients with Gastric Cancer. *BMC Cancer*, **17**, Article No. 283. <https://doi.org/10.1186/s12885-017-3260-2>
- [28] Sareen, J., Affi, T.O., McMillan, K.A. and Asmundson, G.J. (2011) Relationship between Household Income and Mental Disorders: Findings from a Population-Based Longitudinal Study. *Archives of General Psychiatry*, **68**, 419-427. <https://doi.org/10.1001/archgenpsychiatry.2011.15>
- [29] Jeong, A. and An, J.Y. (2017) The Moderating Role of Social Support on Depression and Anxiety for Gastric Cancer Patients and Their Family Caregivers. *PLOS ONE*, **12**, e0189808. <https://doi.org/10.1371/journal.pone.0189808>
- [30] Niu, L., Liang, Y. and Niu, M. (2019) Factors Influencing Fear of Cancer Recurrence in Patients with Breast Cancer: Evidence from a Survey in Yancheng. *Journal of Obstetrics and Gynaecology Research*, **45**, 1319-1327. <https://doi.org/10.1111/jog.13978>
- [31] Shin, J.Y., et al. (2022) Exploring Socio-Demographic, Physical, Psychological, and Quality of Life-Related Factors Related with Fear of Cancer Recurrence in Stomach Cancer Survivors: A Cross-Sectional Study. *BMC Cancer*, **22**, Article No. 414. <https://doi.org/10.1186/s12885-022-09507-2>
- [32] Simard, S., Thewes, B., Humphris, G., Dixon, M., Hayden, C., Mireskandari, S. and Ozakinci, G. (2013) Fear of Cancer Recurrence in Adult Cancer Survivors: A Systematic Review of Quantitative Studies. *Journal of Cancer Survivorship*, **7**, 300-322. <https://doi.org/10.1007/s11764-013-0272-z>
- [33] Jeong, A., Shin, D.W., Kim, S.Y., Yang, H.K. and Park, J.H. (2016) Avoidance of Cancer Communication, Perceived Social Support, and Anxiety and Depression among Patients with Cancer. *Psycho-Oncology*, **25**, 1301-1307. <https://doi.org/10.1002/pon.4060>
- [34] Otani, K. and Uchitomi, Y. (2010) Psychology of Cancer Patients and Their Mental Care. *Nippon Jibiinkoka Gakkai Kaiho*, **113**, 45-52. <https://doi.org/10.3950/jibiinkoka.113.45>
- [35] 陈再中. 腹腔镜和开腹手术治疗胃癌的应用疗效观察[J]. 医药前沿, 2018, 8(22): 44-45. <https://doi.org/10.3969/j.issn.2095-1752.2018.22.030>
- [36] 陈亮, 黄建朋, 何志军, 徐夏, 汪启斌, 董荣坤, 张健, 王佩, 甘云辉, 汪彪, 张征, 梁俊. 腹腔镜全胃切除术与近端胃切除术治疗近端胃癌的临床研究[J]. 腹腔镜外科杂志, 2018, 23(5): 340-343. <https://doi.org/10.13499/j.cnki.fqjwkzz.2018.05.340>
- [37] Ma, J.C., et al. (2021) The Quantification and Clinical Analysis of Depression and Anxiety in Patients Undergoing Da Vinci Robot-Assisted Radical Gastrectomy and Open Radical Gastrectomy. *European Journal of Cancer Prevention: The Official Journal of the European Cancer Prevention Organisation (ECP)*, **6**, 442-447. <https://doi.org/10.1097/CEJ.0000000000000653>
- [38] Cohen, S.P. and Raja, S.N. (2013) Prevention of Chronic Postsurgical Pain: The Ongoing Search for the Holy Grail of Anesthesiology. *Anesthesiology*, **118**, 241-243. <https://doi.org/10.1097/ALN.0b013e31827d4129>
- [39] Ladaninejad, S., Ilali, E., Mousavinasab, N. and Taraghi, Z. (2019) The Relationship between Depressive Symptoms and Demographic-Medical Characteristics among Elder People with Cancer. *Asia-Pacific Journal of Oncology Nursing*, **6**, 424-430. [https://doi.org/10.4103/apjon.apjon\\_13\\_19](https://doi.org/10.4103/apjon.apjon_13_19)
- [40] Hartung, T.J., Brähler, E., Faller, H., Härter, M., Hinz, A., Johansen, C., Keller, M., Koch, U., Schulz, H., Weis, J. and Mehnert, A. (2017) The Risk of Being Depressed Is Significantly Higher in Cancer Patients than in the General Population: Prevalence and Severity of Depressive Symptoms across Major Cancer Types. *European Journal of Cancer*, **72**, 46-53. <https://doi.org/10.1016/j.ejca.2016.11.017>
- [41] 石静静. 癌症患者焦虑、抑郁及相关性调查分析[J]. 临床医学进展, 2022, 12(1): 215-222.

- <https://doi.org/10.12677/ACM.2022.121033>
- [42] Huang, X., Zhang, T.Z., Li, G.H., Liu, L. and Xu, G.Q. (2020) Prevalence and Correlation of Anxiety and Depression on the Prognosis of Postoperative Non-Small Cell Lung Cancer Patients in North China. *Medicine (Baltimore)*, **99**, e19087. <https://doi.org/10.1097/MD.00000000000019087>
- [43] Li, Z., Wei, D., Zhu, C. and Zhang, Q. (2019) Effect of a Patient Education and Rehabilitation Program on Anxiety, Depression and Quality of Life in Muscle Invasive Bladder Cancer Patients Treated with Adjuvant Chemotherapy. *Medicine (Baltimore)*, **98**, e17437. <https://doi.org/10.1097/MD.00000000000017437>
- [44] Zhu, L., Tong, Y.X., Xu, X.S., Xiao, A.T., Zhang, Y.J. and Zhang, S. (2020) High Level of Unmet Needs and Anxiety Are Associated with Delayed Initiation of Adjuvant Chemotherapy for Colorectal Cancer Patients. *Support Care Cancer*, **28**, 5299-5306. <https://doi.org/10.1007/s00520-020-05333-z>
- [45] Liu, X., Haagsma, J., Sijbrands, E., Buijks, H., Boogaard, L., Mackenbach, J.P., Erasmus, V. and Polinder, S. (2020) Anxiety and Depression in Diabetes Care: Longitudinal Associations with Health-Related Quality of Life. *Scientific Reports*, **10**, Article No. 8307. <https://doi.org/10.1038/s41598-020-57647-x>
- [46] Cohen, G.L. and Sherman, D.K. (2014) The Psychology of Change: Self-Affirmation and Social Psychological Intervention. *Annual Review of Psychology*, **65**, 333-371. <https://doi.org/10.1146/annurev-psych-010213-115137>
- [47] Andersen, B.L., DeRubeis, R.J., Berman, B.S., Gruman, J., Champion, V.L., Massie, M.J., Holland, J.C., Partridge, A.H., Bak, K., Somerfield, M.R., Rowland, J.H. and American Society of Clinical Oncology (2014) Screening, Assessment, and Care of Anxiety and Depressive Symptoms in Adults with Cancer: An American Society of Clinical Oncology Guideline Adaptation. *Journal of Clinical Oncology*, **32**, 1605-1619. <https://doi.org/10.1200/JCO.2013.52.4611>
- [48] 吴晓鹃, 肖佩华, 吕群利, 等. “互联网+”医护一体化模式在胃癌术后病人家庭营养管理中的应用效果[J]. 肠外与肠内营养, 2021, 28(5): 286-289.