

# World Journal of *Gastrointestinal Oncology*

*World J Gastrointest Oncol* 2024 November 15; 16(11): 4300-4531



**EDITORIAL**

- 4300 Molecular mechanisms underlying roles of long non-coding RNA small nucleolar RNA host gene 16 in digestive system cancers  
*Yang TF, Li XR, Kong MW*
- 4309 Navigating the complex landscape of crawling-type gastric adenocarcinomas: Insights and implications for clinical practice  
*Yu HB, Jia KF, Wang XF, Li BY, Xin Q*
- 4315 Present and prospect of transarterial chemoembolization combined with tyrosine kinase inhibitor and PD-1 inhibitor for unresectable hepatocellular carcinoma  
*Zhang R, Liu YH, Li Y, Li NN, Li Z*
- 4321 Unveiling the clinicopathological enigma of crawling-type gastric adenocarcinoma  
*Christodoulidis G, Agko SE, Kouliou MN, Koumarelas KE*
- 4326 Practical hints for the diagnosis of mixed neuroendocrine-non-neuroendocrine neoplasms of the digestive system  
*Mattiolo P*
- 4333 Endoscopic diagnosis and management of gallbladder carcinoma in minimally invasive era: New needs, new models  
*Deqing LC, Zhang JW, Yang J*

**REVIEW**

- 4338 Advances in the diagnosis and treatment of MET-variant digestive tract tumors  
*Zhang C, Dong HK, Gao JM, Zeng QQ, Qiu JT, Wang JJ*
- 4354 Effect of colorectal cancer stem cells on the development and metastasis of colorectal cancer  
*Deng RZ, Zheng X, Lu ZL, Yuan M, Meng QC, Wu T, Tian Y*

**MINIREVIEWS**

- 4369 Current clinical trials on gastric cancer surgery in China  
*Zhang S, Hu RH, Cui XM, Song C, Jiang XH*

**ORIGINAL ARTICLE****Retrospective Study**

- 4383 Pattern of colorectal surgery and long-term survival: 10-year experience from a single center  
*Zhu DX, Chen M, Xu DH, He GD, Xu PP, Lin Q, Ren L, Xu JM*

- 4392 Drug-eluting beads chemoembolization combined with programmed cell death 1 inhibitor and lenvatinib for large hepatocellular carcinoma  
*Yang H, Qiu GP, Liu J, Yang TQ*
- 4402 Effect of endoscopic submucosal dissection on gastrointestinal function and nutritional status in patients with early gastric cancer  
*Xu QD, Liu H, Zhang HW, Gao XM, Li YG, Wu ZY*
- 4409 Comparison of clinical features of patients with or without severe gastrointestinal complications in aggressive gastrointestinal lymphomas  
*Liu XH, Chen G, Cao DD, Liu H, Ke XK, Hu YG, Tan W, Ke D, Xu XM*
- 4424 Endoscopic and pathological features of neoplastic transformation of gastric hyperplastic polyps: Retrospective study of 4010 cases  
*Zhang DX, Niu ZY, Wang Y, Zu M, Wu YH, Shi YY, Zhang HJ, Zhang J, Ding SG*

**Basic Study**

- 4436 *BIRC3* induces the phosphoinositide 3-kinase-Akt pathway activation to promote trastuzumab resistance in human epidermal growth factor receptor 2-positive gastric cancer  
*Li SL, Wang PY, Jia YP, Zhang ZX, He HY, Chen PY, Liu X, Liu B, Lu L, Fu WH*
- 4456 Impact and mechanism study of dioscin on biological characteristics of colorectal cancer cells  
*Cai XX, Huang ZF, Tu FY, Yu J*
- 4468 Effects of invigorating-spleen and anticancer prescription on extracellular signal-regulated kinase/mitogen-activated protein kinase signaling pathway in colon cancer mice model  
*Wang W, Wang J, Ren XX, Yue HL, Li Z*

**SYSTEMATIC REVIEWS**

- 4477 Prognostic value of neutrophil-to-lymphocyte ratio in gastric cancer patients undergoing neoadjuvant chemotherapy: A systematic review and meta-analysis  
*Wei ZH, Tuo M, Ye C, Wu XF, Wang HH, Ren WZ, Liu G, Xiang T*

**SCIENTOMETRICS**

- 4489 Bibliometric analysis of olaparib and pancreatic cancer from 2009 to 2022: A global perspective  
*Feng X, Chai YH, Jiang KX, Jiang WB, Chen WC, Pan Y*

**CASE REPORT**

- 4506 Pathologic complete response to conversion therapy in hepatocellular carcinoma using patient-derived organoids: A case report  
*He YG, Wang Z, Li J, Xi W, Zhao CY, Huang XB, Zheng L*

**LETTER TO THE EDITOR**

- 4514** Vascular endothelial growth factor pathway's influence on bevacizumab efficacy in metastatic colorectal cancer treatment  
*Qin Y, Ma FY, Zhang Z, Zhao CH, Huang B*
- 4518** From biomarker discovery to combined therapies: Advancing hepatocellular carcinoma treatment strategies  
*Kong MW, Yu Y, Wan Y, Gao Y, Zhang CX*
- 4522** Are preoperative inflammatory and nutritional markers important for the prognosis of patients with peritoneal metastasis of colorectal cancer?  
*Sforzin I, Borad M, Uson Junior PLS*
- 4528** Elevated *ETV4* expression in cholangiocarcinoma is linked to poor prognosis and may guide targeted therapies  
*Okpete UE, Byeon H*

**ABOUT COVER**

Editorial Board of *World Journal of Gastrointestinal Oncology*, Sezer Saglam, MD, Full Professor, Department of Medical Oncology, Demiroglu Istanbul Bilim University, Istanbul 34349, Türkiye. [saglam@istanbul.edu.tr](mailto:saglam@istanbul.edu.tr)

**AIMS AND SCOPE**

The primary aim of *World Journal of Gastrointestinal Oncology* (WJGO, *World J Gastrointest Oncol*) is to provide scholars and readers from various fields of gastrointestinal oncology with a platform to publish high-quality basic and clinical research articles and communicate their research findings online.

WJGO mainly publishes articles reporting research results and findings obtained in the field of gastrointestinal oncology and covering a wide range of topics including liver cell adenoma, gastric neoplasms, appendiceal neoplasms, biliary tract neoplasms, hepatocellular carcinoma, pancreatic carcinoma, cecal neoplasms, colonic neoplasms, colorectal neoplasms, duodenal neoplasms, esophageal neoplasms, gallbladder neoplasms, *etc.*

**INDEXING/ABSTRACTING**

The WJGO is now abstracted and indexed in PubMed, PubMed Central, Science Citation Index Expanded (SCIE, also known as SciSearch®), Journal Citation Reports/Science Edition, Scopus, Reference Citation Analysis, China Science and Technology Journal Database, and Superstar Journals Database. The 2024 edition of Journal Citation Reports® cites the 2023 journal impact factor (JIF) for WJGO as 2.5; JIF without journal self cites: 2.5; 5-year JIF: 2.8; JIF Rank: 71/143 in gastroenterology and hepatology; JIF Quartile: Q2; and 5-year JIF Quartile: Q2. The WJGO's CiteScore for 2023 is 4.2 and Scopus CiteScore rank 2023: Gastroenterology is 80/167; Oncology is 196/404.

**RESPONSIBLE EDITORS FOR THIS ISSUE**

Production Editor: *Si Zhao*; Production Department Director: *Xiang Li*; Cover Editor: *Jia-Ru Fan*.

**NAME OF JOURNAL**

*World Journal of Gastrointestinal Oncology*

**ISSN**

ISSN 1948-5204 (online)

**LAUNCH DATE**

February 15, 2009

**FREQUENCY**

Monthly

**EDITORS-IN-CHIEF**

Monjur Ahmed, Florin Burada

**EDITORIAL BOARD MEMBERS**

<https://www.wjgnet.com/1948-5204/editorialboard.htm>

**PUBLICATION DATE**

November 15, 2024

**COPYRIGHT**

© 2024 Baishideng Publishing Group Inc

**INSTRUCTIONS TO AUTHORS**

<https://www.wjgnet.com/bpg/gerinfo/204>

**GUIDELINES FOR ETHICS DOCUMENTS**

<https://www.wjgnet.com/bpg/GerInfo/287>

**GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH**

<https://www.wjgnet.com/bpg/gerinfo/240>

**PUBLICATION ETHICS**

<https://www.wjgnet.com/bpg/GerInfo/288>

**PUBLICATION MISCONDUCT**

<https://www.wjgnet.com/bpg/gerinfo/208>

**ARTICLE PROCESSING CHARGE**

<https://www.wjgnet.com/bpg/gerinfo/242>

**STEPS FOR SUBMITTING MANUSCRIPTS**

<https://www.wjgnet.com/bpg/GerInfo/239>

**ONLINE SUBMISSION**

<https://www.f6publishing.com>



## Endoscopic diagnosis and management of gallbladder carcinoma in minimally invasive era: New needs, new models

La-Cuo Deqing, Jun-Wen Zhang, Jian Yang

**Specialty type:** Oncology

**Provenance and peer review:**

Invited article; Externally peer reviewed.

**Peer-review model:** Single blind

**Peer-review report's classification**

**Scientific Quality:** Grade C

**Novelty:** Grade C

**Creativity or Innovation:** Grade C

**Scientific Significance:** Grade C

**P-Reviewer:** Okasha H

**Received:** May 6, 2024

**Revised:** June 20, 2024

**Accepted:** July 11, 2024

**Published online:** November 15, 2024

**Processing time:** 172 Days and 1.1 Hours



**La-Cuo Deqing**, Department of Gastroenterology, Changdu People's Hospital of Xizang, Changdu 854000, Tibet Autonomous Region, China

**Jun-Wen Zhang, Jian Yang**, Department of Gastroenterology, The First Affiliated Hospital of Chongqing Medical University, Chongqing 400016, China

**Corresponding author:** Jian Yang, MD, PhD, Associate Chief Physician, Department of Gastroenterology, The First Affiliated Hospital of Chongqing Medical University, No. 1 Youyi Road, Yuzhong District, Chongqing 400016, China. [yangjian@hospital.cqmu.edu.cn](mailto:yangjian@hospital.cqmu.edu.cn)

### Abstract

Gallbladder cancer (GBC) is a rare and lethal malignancy; however, it represents the most common type of biliary tract cancer. Patients with GBC are often diagnosed at an advanced stage, thus, unfortunately, losing the opportunity for curative surgical intervention. This situation leads to lower quality of life and higher mortality rates. In recent years, the rapid development of endoscopic equipment and techniques has provided new avenues and possibilities for the early and minimally invasive diagnosis and treatment of GBC. This editorial comments on the article by Pavlidis *et al.* Building upon their work, we explore the new needs and corresponding models for managing GBC from the endoscopic diagnosis and treatment perspective.

**Key Words:** Endoscopy; Diagnosis and treatment; Gallbladder carcinoma; Minimal invasive; New need; New model

©The Author(s) 2024. Published by Baishideng Publishing Group Inc. All rights reserved.

**Core Tip:** Gallbladder cancer (GBC) poses a significant challenge due to its low rates of early diagnosis and high mortality. The evolving endoscopic technologies in the minimally invasive era present new possibilities for the early diagnosis and treatment of GBC, making them highly research-worthy and promising for application. The promotion and application of advanced endoscopic equipment and techniques, such as endoscopic ultrasound, magnifying endoscopy, choledochoscopy, confocal laser endomicroscopy, and natural orifice transluminal endoscopic surgery technology, are expected to offer new management models for the global demand in GBC diagnosis and treatment.

**Citation:** Deqing LC, Zhang JW, Yang J. Endoscopic diagnosis and management of gallbladder carcinoma in minimally invasive era: New needs, new models. *World J Gastrointest Oncol* 2024; 16(11): 4333-4337

**URL:** <https://www.wjgnet.com/1948-5204/full/v16/i11/4333.htm>

**DOI:** <https://dx.doi.org/10.4251/wjgo.v16.i11.4333>

## INTRODUCTION

Despite being relatively rare, gallbladder cancer (GBC) is the most common malignancy of the biliary tract and is globally recognized for its poor prognosis[1,2]. Recent studies have found relatively higher GBC mortality rates in countries with medium human development index and high-income Asia-Pacific regions[1,3]. Additionally, there has been a rising trend in GBC mortality after an initial decline in some high-income countries[4].

Although regional and demographic variations in GBC are pronounced, the global burden of this cancer is expected to rise considerably in the next two decades, a trend that merits serious attention and contemplation[3,5]. The poor treatment outcomes for GBC patients are not mainly due to inadequate surgical techniques or the absence of therapeutic modalities such as chemotherapy, immunotherapy, targeted therapy, and radiotherapy. The primary issue lies in the low rate of early diagnosis of GBC, which results in futile attempts at various treatment modalities at an advanced cancer stage. From this perspective, the most cost-effective approach to improving GBC patients' five-year survival rate and quality of life (QoL) would be early diagnosis followed by subsequent minimally invasive treatment. Advanced endoscopic equipment and techniques with rapid developments in recent years, such as endoscopic ultrasound (EUS), magnifying endoscopy, choledochoscopy, confocal laser endomicroscopy (CLE), and natural orifice transluminal endoscopic surgery (NOTES) technology, offer new possibilities for achieving the abovementioned objectives[6]. We are very interested in the review by Pavlidis *et al*[7] published in a recent issue of *World Journal of Gastrointestinal Oncology*. In the ever-evolving landscape of digestive oncology, this enlightening review reiterates the emerging trends in diagnosing and treating GBC. We thank Pavlidis *et al*[7] for their review, which has raised attention to new trends in diagnosing and treating GBC.

## ENDOSCOPIC DIAGNOSIS AND MANAGEMENT

*Reference Citation Analysis* (RCA, <https://www.referencecitationanalysis.com/>) is a unique artificial intelligence system for citation evaluation of biomedical literature. RCA has been employed to analyze previous studies of GBC's endoscopic diagnosis and management to April 2024. Published research in this field primarily focuses on early endoscopic diagnosis and its comparison with traditional examinations, palliative endoscopic treatment for advanced-stage patients, and minimally invasive endoscopic surgery for gallbladder diseases.

First, early diagnosis of GBC is paramount for improving patients' far-from-ideal five-year survival rates and QoL. However, preoperative diagnosis of neoplastic gallbladder polyps and gallbladder wall thickening remains a challenge, and the application value of a 1 cm threshold as a surgical indication for cholecystectomy in gallbladder polyps has also been questioned[8]. Despite the availability of various diagnostic methods for GBC, such as abdominal ultrasound, computed tomography, magnetic resonance imaging, positron emission tomography computed tomography, or 18F-FDG positron emission tomography-magnetic resonance imaging, it is regrettable that these methods have not significantly improved the early detection rate of GBC. Compared to these methods, as Pavlidis *et al*[7] mentioned, endoscopic techniques enable pathological diagnosis of GBC. Moreover, current endoscopic techniques allow visualization of lesions inside the gallbladder, facilitating targeted biopsies such as EUS-guided fine needle aspiration/fine needle biopsy to obtain cancer cells for pathological confirmation, thereby definitively diagnosing GBC and improving accuracy[9,10]. Recent research has also demonstrated the safety and diagnostic efficacy of transpapillary biopsies, NOTES biopsies, and EUS-guided fine needle aspiration/fine needle biopsy of gallbladder lesions[11]. The use of advanced imaging techniques like EUS, magnifying endoscopy, chromoendoscopy, and CLE, coupled with targeted biopsies within the gallbladder inner wall, facilitates the management of high-risk gallbladder polyps, eliminating high-risk factors and attaining primary prevention goals for GBC[12,13].

Second, palliative endoscopic treatment for patients with advanced GBC is one of the earliest areas involved in GBC endoscopic therapy. The previous endoscopic treatments for advanced GBC patients primarily aimed to improve biliary obstruction through endoscopic retrograde cholangiopancreatography or percutaneous transhepatic cholangioscopy and alleviate gastric outlet obstruction *via* endoscopic dilation or gastrointestinal stenting. With the advent of EUS, SpyGlass™ Direct Visualization system, lumen-apposing metal stents, and other novel endoscopic equipment, the specific procedures and success rates of the above operations have been optimized[14]. Moreover, innovative and effective endoscopic diagnostic and therapeutic methods have emerged, including EUS-guided gastroenterostomy, EUS-guided celiac plexus neurolysis, photodynamic therapy, radiofrequency ablation, and intraluminal brachytherapy[15,16]. These advances contribute to more minimally invasive and effective treatment goals for patients with advanced GBC, such as pain relief, suppressing tumor progression, and improving gastrointestinal and biliary obstructions.

Third, advancing endoscopic equipment and techniques have offered expanded possibilities for minimally invasive endoscopic surgery for gallbladder diseases. Current endoscopic methods have been able to achieve a series of medical objectives in the diagnosis and treatment of acute cholecystitis, gallbladder stones, gallbladder polyps, and gallbladder

tumors, such as targeted biopsy for definitive diagnosis, removal of stones or polyps, and alleviation of obstruction or pain symptoms[12,17]. Treating gallbladder inflammation, polyps, and stones through endoscopic procedures helps prevent or reduce the occurrence of GBC. Moreover, a systematic review found that patients with T1a GBC had a 5-year survival rate of up to 100% after cholecystectomy alone[18]. From this perspective, endoscopic cholecystectomy *via* NOTES could theoretically be an effective and minimally invasive option for early-stage GBC (Tis and T1a) patients. Even more, implementing a whole-process management approach that encompasses early endoscopic detection of GBC (Tis and T1a) in high-risk patients, minimally invasive endoscopic surgical removal of the gallbladder, and endoscopic postoperative surveillance may establish a novel model for the entire management of these early-stage GBC patients using endoscopic techniques.

---

## NEW NEEDS AND NEW MODELS

---

“Prevention is always better than cure”, this adage also holds for GBC. In the current landscape of diverse and often conflicting health information, accessing accurate and beneficial cancer prevention information has become an urgent need for people worldwide, especially those at high risk of GBC. Public health initiatives aimed at educating people about risk factors associated with GBC, such as obesity, gallstones, chronic inflammation of the gallbladder, and factors contributing to increased mortality rates like the consumption of red meat, can help reduce the incidence and improve the prognosis for GBC patients[19-22]. Moreover, promoting regular check-ups, particularly in high-risk regions and populations, can lead to early detection and better outcomes.

In the context of increasing health consciousness and elevated expectations for medical efficacy, there is a significant and growing demand for a comprehensive and integrated suite of medical services, particularly in regions with a high prevalence of GBC. These services should encompass GBC risk prediction, differential diagnoses for suspicious lesions, precise preoperative staging, minimally invasive intervention options, and comprehensive postoperative surveillance, all geared towards the early detection and diagnosis of this relentless killer to enhance treatment success and prolong survival[19]. The advantages of endoscopy in direct visualization and targeted biopsy of early-staged GBC, eradicating high-risk factors, removal of early-stage lesions, and high-quality postoperative surveillance are indispensable in meeting these needs. For patients with advanced GBC, palliative care is crucial for improving their QoL. Pain management, symptom control, and psychological support are vital components of palliative care. Further integrating and standardizing applicable palliative treatments can substantially improve patients’ sense of well-being during and after therapy [15,23,24].

Meanwhile, the complexity of GBC necessitates a collaborative effort among various medical disciplines. A multidisciplinary team of gastroenterologists, surgeons, endoscopists, oncologists, radiologists, pathologists, and support staff can provide comprehensive medical care that addresses the entire spectrum of GBC management[25,26]. These professionals can ensure that GBC patients receive the most appropriate and effective treatment plans based on the latest research and individualized needs. Another fascinating development in the field is the potential integration of artificial intelligence technologies and machine learning methods into GBC practice. These advanced technologies have seen rapid progress in recent years and promise to improve early diagnosis and prognosis prediction in GBC patients[27,28]. The multidisciplinary team may more accurately identify and characterize lesions, predict disease progression, and develop personalized treatment plans using artificial intelligence and machine learning.

To achieve early diagnosis of GBC for optimal treatment outcomes, our endoscopy center recommends incorporating EUS examination of the gallbladder inner wall as a quality control indicator for high-risk GBC patients. We also advocate using EUS-guided elastography, contrast-enhanced EUS, trans-papillary biopsy, and NOTES biopsy when necessary. Additionally, we recommend regular endoscopic follow-up, including EUS, for post-cholecystectomy GBC patients to improve the quality of postoperative monitoring. Our explorations may provide valuable insights for endoscopic practices in GBC patients, and we expect to share our work with colleagues worldwide once we have gathered sufficient data.

---

## CONCLUSION

---

In conclusion, the endoscopic diagnosis and management of GBC have seen significant advancements in recent years, with a growing emphasis on early detection and minimally invasive treatment options. With the ongoing advancements in endoscopic equipment and techniques, further research and exploration are likely to lead to more minimally invasive and high-quality approaches to meeting the medical needs of GBC patients.

---

## FOOTNOTES

---

**Author contributions:** Zhang JW and Yang J conceptualized and designed the research; Deqing LC and Yang J performed the literature search, analyzed the data, and wrote the original manuscript; Zhang JW edited the final manuscript. All authors have read and approved the final manuscript.

**Supported by** the Education and Teaching Reform Project of the First Clinical College of Chongqing Medical University, No. CMER202305; and the Program for Youth Innovation in Future Medicine, Chongqing Medical University, No. W0138.



**Conflict-of-interest statement:** All the authors report no relevant conflicts of interest for this article.

**Open-Access:** This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <https://creativecommons.org/licenses/by-nc/4.0/>

**Country of origin:** China

**ORCID number:** Jun-Wen Zhang [0000-0003-2911-598X](https://orcid.org/0000-0003-2911-598X); Jian Yang [0000-0001-8170-0727](https://orcid.org/0000-0001-8170-0727).

**S-Editor:** Wang JJ

**L-Editor:** A

**P-Editor:** Zhao YQ

## REFERENCES

- 1 Su J, Liang Y, He X. Global, regional, and national burden and trends analysis of gallbladder and biliary tract cancer from 1990 to 2019 and predictions to 2030: a systematic analysis for the Global Burden of Disease Study 2019. *Front Med (Lausanne)* 2024; **11**: 1384314 [PMID: 38638933 DOI: [10.3389/fmed.2024.1384314](https://doi.org/10.3389/fmed.2024.1384314)]
- 2 de Reuver PR, van der Post RS. Clinicopathological and Molecular Insights into Gallbladder Cancer. *Cancers (Basel)* 2023; **15** [PMID: 37345065 DOI: [10.3390/cancers15102728](https://doi.org/10.3390/cancers15102728)]
- 3 Vuthaluru S, Sharma P, Chowdhury S, Are C. Global epidemiological trends and variations in the burden of gallbladder cancer. *J Surg Oncol* 2023; **128**: 980-988 [PMID: 37818916 DOI: [10.1002/jso.27450](https://doi.org/10.1002/jso.27450)]
- 4 Torre LA, Siegel RL, Islami F, Bray F, Jemal A. Worldwide Burden of and Trends in Mortality From Gallbladder and Other Biliary Tract Cancers. *Clin Gastroenterol Hepatol* 2018; **16**: 427-437 [PMID: 28826679 DOI: [10.1016/j.cgh.2017.08.017](https://doi.org/10.1016/j.cgh.2017.08.017)]
- 5 Miranda-Filho A, Piñeros M, Ferreccio C, Adsay V, Soerjomataram I, Bray F, Koshiol J. Gallbladder and extrahepatic bile duct cancers in the Americas: Incidence and mortality patterns and trends. *Int J Cancer* 2020; **147**: 978-989 [PMID: 31922259 DOI: [10.1002/ijc.32863](https://doi.org/10.1002/ijc.32863)]
- 6 Chan SM, Teoh AYB, Yip HC, Wong VWY, Chiu PWY, Ng EKW. Feasibility of per-oral cholecystoscopy and advanced gallbladder interventions after EUS-guided gallbladder stenting (with video). *Gastrointest Endosc* 2017; **85**: 1225-1232 [PMID: 27756612 DOI: [10.1016/j.gie.2016.10.014](https://doi.org/10.1016/j.gie.2016.10.014)]
- 7 Pavlidis ET, Galanis IN, Pavlidis TE. New trends in diagnosis and management of gallbladder carcinoma. *World J Gastrointest Oncol* 2024; **16**: 13-29 [PMID: 38292841 DOI: [10.4251/wjgo.v16.i1.13](https://doi.org/10.4251/wjgo.v16.i1.13)]
- 8 Wennmacker SZ, van Dijk AH, Raessens JHJ, van Laarhoven CJHM, Drenth JPH, de Reuver PR, Nagtegaal ID. Polyp size of 1 cm is insufficient to discriminate neoplastic and non-neoplastic gallbladder polyps. *Surg Endosc* 2019; **33**: 1564-1571 [PMID: 30203209 DOI: [10.1007/s00464-018-6444-1](https://doi.org/10.1007/s00464-018-6444-1)]
- 9 Zhou L, Wang Y, Zhou F, Ni M, Wang L. Visualization of a gallbladder neuroendocrine carcinoma using a novel peroral cholangioscope. *Endoscopy* 2023; **55**: E829-E830 [PMID: 37348548 DOI: [10.1055/a-2098-1350](https://doi.org/10.1055/a-2098-1350)]
- 10 Tamura T, Ashida R, Kitano M. The usefulness of endoscopic ultrasound in the diagnosis of gallbladder lesions. *Front Med (Lausanne)* 2022; **9**: 957557 [PMID: 36106323 DOI: [10.3389/fmed.2022.957557](https://doi.org/10.3389/fmed.2022.957557)]
- 11 Kuraishi Y, Hara K, Haba S, Kuwahara T, Okuno N, Yanaidani T, Ishikawa S, Yasuda T, Yamada M, Fukui T, Mizuno N. Diagnostic performance and safety of endoscopic ultrasound-guided fine-needle aspiration/biopsy for gallbladder lesions. *Dig Endosc* 2024; **36**: 206-214 [PMID: 37186389 DOI: [10.1111/den.14576](https://doi.org/10.1111/den.14576)]
- 12 Liu H, Lu Y, Shen K, Zhou M, Mao X, Li R. Advances in the management of gallbladder polyps: establishment of predictive models and the rise of gallbladder-preserving polypectomy procedures. *BMC Gastroenterol* 2024; **24**: 7 [PMID: 38166603 DOI: [10.1186/s12876-023-03094-7](https://doi.org/10.1186/s12876-023-03094-7)]
- 13 Cho IR, Lee SH, Choi JH, Chun JW, Lee MW, Lee MH, Kim J, Lee TS, Paik WH, Ryu JK, Kim YT. Diagnostic Performance of Endoscopic Ultrasound Elastography for Differential Diagnosis of Gallbladder Polyp. *Gastrointest Endosc* 2024 [PMID: 38431102 DOI: [10.1016/j.gie.2024.02.015](https://doi.org/10.1016/j.gie.2024.02.015)]
- 14 Sagami R, Mizukami K, Sato T, Nishikiori H, Murakami K. Strategy Comparison of Endoscopic Ultrasound-Guided Gallbladder Drainage to Percutaneous Transhepatic Gallbladder Drainage, Following Failed Emergent Endoscopic Transpapillary Gallbladder Drainage. *J Clin Med* 2023; **12** [PMID: 38002649 DOI: [10.3390/jcm12227034](https://doi.org/10.3390/jcm12227034)]
- 15 Schepis T, Boškoski I, Tringali A, Bove V, Costamagna G. Palliation in Gallbladder Cancer: The Role of Gastrointestinal Endoscopy. *Cancers (Basel)* 2022; **14** [PMID: 35406458 DOI: [10.3390/cancers14071686](https://doi.org/10.3390/cancers14071686)]
- 16 Rai P, Cr L, Kc H. Endoscopic ultrasound-guided celiac plexus neurolysis improves pain in gallbladder cancer. *Indian J Gastroenterol* 2020; **39**: 171-175 [PMID: 32065352 DOI: [10.1007/s12664-019-01003-z](https://doi.org/10.1007/s12664-019-01003-z)]
- 17 Irani SS, Sharma NR, Storm AC, Shah RJ, Chahal P, Willingham FF, Swanstrom L, Baron TH, Shlomovitz E, Kozarek RA, Peetermans JA, McMullen E, Ho E, van der Merwe SW. Endoscopic Ultrasound-guided Transluminal Gallbladder Drainage in Patients With Acute Cholecystitis: A Prospective Multicenter Trial. *Ann Surg* 2023; **278**: e556-e562 [PMID: 36537290 DOI: [10.1097/SLA.0000000000005784](https://doi.org/10.1097/SLA.0000000000005784)]
- 18 Søreide K, Guest RV, Harrison EM, Kendall TJ, Garden OJ, Wigmore SJ. Systematic review of management of incidental gallbladder cancer after cholecystectomy. *Br J Surg* 2019; **106**: 32-45 [PMID: 30582640 DOI: [10.1002/bjs.11035](https://doi.org/10.1002/bjs.11035)]
- 19 Boekstegers F, Scherer D, Barahona Ponce C, Marcelain K, Gárate-Calderón V, Waldenberger M, Morales E, Rojas A, Muñoz C, Retamales J, de Toro G, Barajas O, Rivera MT, Cortés A, Loader D, Saavedra J, Gutiérrez L, Ortega A, Bertrán ME, Bartolotti L, Gabler F, Campos M, Alvarado J, Moisés F, Spencer L, Nervi B, Carvajal-Hausdorf D, Losada H, Almau M, Fernández P, Olloquequi J, Fuentes-Guajardo M, Gonzalez-Jose R, Bortolini MC, Acuña-Alonzo V, Gallo C, Linares AR, Rothhammer F, Lorenzo Bermejo J. Development and internal validation of a multifactorial risk prediction model for gallbladder cancer in a high-incidence country. *Int J Cancer* 2023; **153**: 1151-1161

- [PMID: 37260300 DOI: 10.1002/ijc.34607]
- 20 **Sturm N**, Schuhbaur JS, Hüttner F, Perkhofer L, Ettrich TJ. Gallbladder Cancer: Current Multimodality Treatment Concepts and Future Directions. *Cancers (Basel)* 2022; **14** [PMID: 36428670 DOI: 10.3390/cancers14225580]
- 21 **Foley KG**, Lahaye MJ, Thoeni RF, Soltes M, Dewhurst C, Barbu ST, Vashist YK, Rafaelsen SR, Arvanitakis M, Perinel J, Wiles R, Roberts SA. Management and follow-up of gallbladder polyps: updated joint guidelines between the ESGAR, EAES, EFISDS and ESGE. *Eur Radiol* 2022; **32**: 3358-3368 [PMID: 34918177 DOI: 10.1007/s00330-021-08384-w]
- 22 **Nie C**, Yang T, Liu L, Hong F. Trend analysis and risk of gallbladder cancer mortality in China, 2013-2019. *Public Health* 2022; **203**: 31-35 [PMID: 35026577 DOI: 10.1016/j.puhe.2021.12.002]
- 23 **Hunter LA**, Soares HP. Quality of Life and Symptom Management in Advanced Biliary Tract Cancers. *Cancers (Basel)* 2021; **13** [PMID: 34680223 DOI: 10.3390/cancers13205074]
- 24 **Kam AE**, Masood A, Shroff RT. Current and emerging therapies for advanced biliary tract cancers. *Lancet Gastroenterol Hepatol* 2021; **6**: 956-969 [PMID: 34626563 DOI: 10.1016/S2468-1253(21)00171-0]
- 25 **Zhang B**, Zhou J, Xie W, Tao K, Lu S, Yuan X, Liu L, Wang W, Mao Y, Bie P, Liu J, Bi X, Zhang Z, Liang C, Cai J, Jian Z, Lv Y, Zhu P, Zhang W, Yang H, Zhou W, Zhang B, Chen X; MDT Committee of The Chinese Chapter of the International Hepato-Pancreato-Biliary Association. Expert consensus on organizing the multidisciplinary team (MDT) diagnosis and treatment of hepato-pancreato-biliary diseases in China. *Sci China Life Sci* 2022; **65**: 1036-1039 [PMID: 35314917 DOI: 10.1007/s11427-021-2079-7]
- 26 **Ashai N**, Prasad P, Rajdev L. Multimodality Management of Localized Biliary Cancer. *Curr Treat Options Oncol* 2019; **20**: 58 [PMID: 31144050 DOI: 10.1007/s11864-019-0655-0]
- 27 **Jang SI**, Kim YJ, Kim EJ, Kang H, Shon SJ, Seol YJ, Lee DK, Kim KG, Cho JH. Diagnostic performance of endoscopic ultrasound-artificial intelligence using deep learning analysis of gallbladder polypoid lesions. *J Gastroenterol Hepatol* 2021; **36**: 3548-3555 [PMID: 34431545 DOI: 10.1111/jgh.15673]
- 28 **Zhou Y**, Chen S, Wu Y, Li L, Lou Q, Chen Y, Xu S. Multi-clinical index classifier combined with AI algorithm model to predict the prognosis of gallbladder cancer. *Front Oncol* 2023; **13**: 1171837 [PMID: 37234992 DOI: 10.3389/fonc.2023.1171837]



Published by **Baishideng Publishing Group Inc**  
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA

**Telephone:** +1-925-3991568

**E-mail:** [office@baishideng.com](mailto:office@baishideng.com)

**Help Desk:** <https://www.f6publishing.com/helpdesk>

<https://www.wjgnet.com>

