



Review Article

COLORECTAL CANCER FROM AN AYURVEDIC PERSPECTIVE: INTEGRATIVE REVIEW

Ray Singh<sup>1\*</sup>, B. Swapna<sup>2</sup>

<sup>1</sup>PG Scholar, <sup>2</sup>Professor, Department of Shalya Tantra, National Institute of Ayurveda, Jaipur, Rajasthan, India.

Article info

Article History:

Received: 17-09-2025

Accepted: 21-10-2025

Published: 15-11-2025

KEYWORDS:

Colorectal cancer,  
*Arbuda*, Integrative  
oncology,  
Ayurvedic  
Medicines-adjuncts,  
Prevention.

ABSTRACT

Colorectal cancer (CRC) is a leading cause of cancer-related morbidity and mortality globally, with rising incidence in developing populations, including India. While conventional oncology focuses on genetic, dietary, lifestyle, and environmental risk factors, Ayurveda speculates abnormal growths such as tumors under *Arbuda* and *Granthi*, assigning their pathogenesis to imbalances in *Doshas*, *Dhatus*, *Srotas*, and impaired *Agni*. This description review integrates biomedical and Ayurvedic perspectives on CRC, examining disease burden, risk factors, dietary influences, and potential adjunctive therapies. Evidence from hospital-based case-control studies indicate associations between certain dietary patterns (e.g., excessive consumption of pungent foods and curd) and increased CRC risk, associating with Ayurvedic concepts of *Ushna*, *Ruksha*, *Kleda*, and *Srota Avarodha*. Preclinical and in-silico studies suggest that Ayurvedic Medicines, including *Curcumin*, *Triphala*, and *Glycyrrhiza glabra*, may modulate tumor pathways, though clinical evidence remains inadequate. Integrative preventive strategies emphasizing dietary-lifestyle modifications, maintenance of *Agni*, *Srotas*, and use of supportive herbs show promise in CRC risk reduction and supportive care. Despite the potential, current evidence is preliminary, with a paucity of randomized controlled trials, standardization challenges, and safety considerations. Future research should focus on rigorously evaluating Ayurvedic interventions in high-risk populations and developing protocolized integrative oncology models. Integrating Ayurvedic insights alongside conventional therapy may enhance prevention, reduce treatment-related side effects, and improve quality of life in CRC patients.

INTRODUCTION

Colorectal cancer (CRC) is a malignancy originating in the colon or rectum and ranks among the leading causes of cancer-related morbidity and mortality worldwide. Because of its rising occurrence, particularly in communities experiencing rapid urbanization, lifestyle transitions, and dietary changes, colorectal cancer (CRC) poses a serious public health concern on a global scale. Both the incidence and mortality of colorectal cancer (CRC) are increasing, according to data from gastrointestinal oncology, and forecasts indicate that this trend will continue to rise over the next several decades [4].

The necessity of early detection, preventive measures, and supporting management frameworks is highlighted by this increasing burden. The old Indian medical system, Ayurveda, classifies growths that resemble tumors under terms like *Granthi* (nodular formations) and *Arbuda* (tumor or swelling). These disorders are explained by Ayurvedic pathophysiology in terms of *Agni* (digestive/metabolic fire) dysregulation, *Dosha* imbalances, *Dhatu* (tissue) malfunction, and *Srotas* (body channels) blockage [1]. An alternate perspective that emphasizes systemic harmony, lifestyle modification, and nutritional therapies in addition to contemporary biomedical management is provided by the integrative study of colorectal cancer (CRC) via the Ayurvedic lens. There is growing interest in investigating how Ayurvedic concepts and practices could enhance traditional frameworks for cancer prevention, therapy, and supportive care[2]. A combination of traditional Ayurvedic knowledge and modern biomedical understanding is both required and urgent, given the

Access this article online	
Quick Response Code	<a href="https://doi.org/10.47070/ijapr.v13i10.3868">https://doi.org/10.47070/ijapr.v13i10.3868</a>
	Published by Mahadev Publications (Regd.) publication licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0)

rising incidence of colorectal cancer (CRC) in India and around the world.

### Rationale

The main causes of colorectal cancer (CRC) are primarily identified by conventional oncology as genetic predisposition, environmental exposures, inflammatory diseases, and lifestyle risk factors (such as nutrition, physical inactivity, and substance use) [4]. Although detection and therapy have been improved by this framework, systemic functional integrity is frequently neglected in favor of discrete organ pathology. Ayurveda, on the other hand, views disease as the result of systemic imbalance and disruption of function, which includes tissue homeostasis (*Dhatu*), reduced digestive/metabolic fire (*Agni*), and blockage of body channels (*Srotas*). It might be able to find complementary strategies for prevention, early intervention, and supportive care that are not usually taken into account in normal oncologic therapy by projecting current biological understanding of colorectal cancer onto Ayurvedic principles [3].

### AIM

The current review aims to:

1. Provide an overview of the risk factors, epidemiology, and biological burden related to colorectal cancer.
2. Describe the mechanical concepts that may be related to colorectal cancer (CRC) and the Ayurvedic conceptualization of tumor genesis (*Arbuda/Granthi*).
3. Examine Ayurvedic evidence, such as studies on herbal and phytochemicals, dietary risk factors, and clinical case reports that are pertinent to colorectal cancer.
4. Talk about the possible uses, restrictions, and future paths of incorporating Ayurvedic methods into the treatment of colorectal cancer.

### METHODS

Evidence from both modern biomedical literature and traditional Ayurvedic sources is synthesized in this narrative review. Among the sources were:

1. **Classical Ayurvedic Texts:** For descriptions of tumor-like states (*Arbuda*, *Granthi*), systemic channels (*Srotas*), digestive/metabolic fire (*Agni*), and tissue homeostasis (*Dhatu*), texts like the Sushruta Samhita and Charaka Samhita were studied [3,7].
2. **Current Literature:** Ayurvedic viewpoints on cancer, colorectal cancer, and integrative therapies were the main topics of a review of peer-reviewed papers that were indexed in PubMed, PMC, and Google Scholar. "Ayurveda and Cancer," "Colorectal cancer and Ayurveda," "Dietary risk and Ayurveda and Colorectal," and "Herbs and Colorectal cancer India" were among the search terms used.

3. Case reports, animal studies, in-silico analyses, and herbal intervention trials pertinent to colorectal cancer were reviewed as preclinical and clinical evidence. Peer-reviewed, English-language sources were prioritized in the review, and anecdotal or unconfirmed accounts were not included.

Four main domains were used to classify the evidence:

1. The etiology of tumor formation as conceptualized by Ayurveda.
2. Ayurvedic lifestyle and food risk factors for colorectal cancer.
3. Herbal and Ayurvedic therapeutic approaches.
4. Clinical and practical information that is pertinent to integrative care. The goal of the synthesis was to emphasize the gaps, constraints, and possible directions for integrative research while drawing comparisons between traditional biomedical knowledge and Ayurvedic views.

### RESULTS

#### Burden and Biomedical Risk Factors of CRC

CRC incidence increases sharply with age, peaking in the 50–70-year age group. Key biomedical risk factors include family history of CRC, genetic syndromes (e.g., Lynch syndrome, familial adenomatous polyposis), dietary patterns high in red and processed meats, low dietary fibre, sedentary lifestyle, smoking, alcohol consumption, and chronic inflammatory conditions such as inflammatory bowel disease [4].

Due to sedentary lifestyles, a decrease in fiber intake, and an increase in processed food consumption, urbanization and dietary changes have increased the incidence of colorectal cancer in India [5]. In many areas, early detection is still underutilized, especially in rural and resource-constrained settings, even with well-established screening methods like colonoscopy and fecal occult blood testing [6,12]. According to epidemiology, a combination of lifestyle changes, longer life expectancy, and insufficient screening leads to greater mortality rates, advanced disease stages, and delayed detection.

#### Ayurvedic Conceptualization of Tumour and CRC

Ayurveda mainly conceptualizes abnormal growths under the terms *Granthi* (nodular masses) and *Arbuda* (tumors). Tumor development is described in classical writings as the consequence of:

1. **Dosha Vitiation:** *Pitta* and *Kapha* doshas in particular. *Pitta* encourages heat and metabolic imbalance, while *Kapha* leads to buildup, stagnation, and excessive wetness.
2. **Obstruction of Srotas:** Tissue dysfunction is facilitated by obstructions in the body's channels (*Srotas*), which hinder waste removal, metabolic clearance, and nutrient flow.

**3. Agni Dysfunction:** Incomplete digestion and the buildup of *Ama* (metabolic poisons) are caused by impaired digestive and metabolic fire (*Agnimandhya*).

**4. Dhatu Imbalance:** Pathological growth may be predisposed by either tissue accumulation or tissue depletion (*Dhatu-kshaya*) [3,7].

Ayurvedic interpretations of colorectal pathology consider tumor growth in the colon or rectum to be *Arbuda* of the large intestine, which is made worse by *Ama* (toxins), *Kleda* (excess moisture), and malfunction of the *Rasavaha* and *Annavaha Srotas* (nutrient and digestion channels). These elements work together to provide a localized milieu that is favorable to tissue malfunction, persistent inflammation, and aberrant proliferation. In this context, cancer might be considered *Agnimandhya*, *Srotova Avrodha* (obstructing the channel), *Ojo-kshaya* (loss of vital essence), and *Dhatu-kshaya* [7]. In contrast to contemporary organ-centric oncology, which emphasizes isolated tumor elimination, this systemic approach emphasizes holistic restoration.

#### Ayurvedic Dietary Risk and CRC

Diet is central to both modern and Ayurvedic paradigms of CRC risk. A hospital-based case-control study in India evaluated 420 CRC patients and 116 healthy controls, focusing on consumption of green chilli, red chilli powder, and curd. The study found statistically significant associations between dietary habits and CRC risk: curd combined with red chilli powder exhibited an odds ratio of 5.08 (95% CI 2.40–10.75), while green chilli alone showed an OR of 2.01 (95% CI 1.33–3.05;  $p=0.001$ ) [8].

According to Ayurveda, pungent foods (*Katu*) are *Ushna* and *Ruksha*, which vitiate the *Pitta* and *Vata doshas* and cause the colon to become hotter and drier, which may result in *Dushta Arbuda*. Curd (*Dahi*) is *Kapha*-increasing, which may increase the risk of tumor formation by causing *Kleda* accumulation, *Srotas* obstruction, and local inflammation (*Shotha*) [8]. Therefore, the Ayurvedic evaluation of dietary risk is conceptually consistent with biological knowledge of oxidative stress, inflammation, and mucosal irritation, indicating that traditional dietary principles might support modern preventive advice.

#### Ayurvedic Phytocompound and Therapeutic Adjunctive Evidence in CRC

Indian medicinal herbs have been investigated for possible anti-CRC efficacy in a number of preclinical and in silico studies:

- A 2023 in-silico investigation highlighted the molecular plausibility for anti-tumor activity by identifying phytocompounds from Indian plants as putative focal adhesion kinase (FAK) inhibitors [9].

- Herbs and formulations like *triphala* and *curcumin* are mentioned in integrative oncology reviews; animal models show that *triphala* reduces tumors by about 35% and *curcumin* reduces polyps by about 40% [2,11].

Case reports offer initial clinical proof.

1. According to CT imaging, the treatment of *Madhuyasti* (*Glycyrrhiza glabra*) *Ksheerpaka Kalpa* decreased lesion thickness in a patient with Lynch syndrome, a hereditary colorectal cancer, from 2.8 cm to 1.5 cm over a period of 15 days [6].
2. A patient with stage III sigmoid colon cancer was treated with Ayurvedic supportive care in addition to traditional adjuvant chemotherapy (FOLFOX). According to reports, the integration improved five-year disease-free survival and reduced the negative effects of chemotherapy [10].

#### Integrative Framework and Lifestyle Preventive Recommendations

Ayurveda places strong emphasis on preventive care, incorporating diet, daily routines (*Dinacharya*), seasonal regimens (*Ritucharya*), and lifestyle practices (*Vihar*) [7]. These measures align closely with modern preventive strategies for CRC, including high-fibre diets, physical activity, and reduction of red/processed meats and alcohol consumption.

1. **Maintaining Agni:** Ensuring good digestive and metabolic function to minimize accumulation of *Ama* is one of the specific Ayurvedic advice related to colorectal cancer.
2. **Maintaining Srota Potency:** Encouraging regular bowel motions and clear nutrition and metabolic pathways.
3. **Controlling Diet and Lifestyle:** Eating a balanced, high-fiber diet, avoiding excessive *Pitta* and *Kapha*, and reducing *Kleda* buildup.
4. **Supportive Ayurvedic Medicine and Formulations:** Modifying inflammatory pathways and preserving digestive/metabolic integrity with specific herbal therapies.

A comprehensive preventive framework for colorectal cancer is created by combining these activities with biological risk reduction techniques.

#### DISCUSSION

Ayurvedic and scientific viewpoints on colorectal cancer are synthesized in this review, which also highlights conceptual overlaps and possible directions for integrative care.

#### Holistic Disease Understanding

The Ayurvedic approach places the development of tumors in a systemic framework. Ayurveda ascribes aberrant growths to *Dosha-Dhatu-Srota* imbalances, *Agni* dysfunction, and *Ama* buildup rather than concentrating only on localized organ pathology. A

multi-layered approach to management and prevention is made possible by this viewpoint:

1. Restoring digestive and metabolic fire to stop the buildup of toxins is known as correct *Agnimandhya*.
2. **Preserve Srota Flow:** Promoting regular bowel movements and guaranteeing unhindered circulation of nutrients and metabolites.
3. **Control Diet and Lifestyle:** Keeping to seasonal/daily rhythms and avoiding foods that exacerbate *Pitta*, *Kapha*, or *Kleda*.
4. **Adjunctive Ayurvedic Medicines Support:** Applying Ayurvedic Medicines as supplemental, as opposed to main, anti-cancer treatments.

### Dietary Risk and Epidemiologic Correlation

Ayurveda and contemporary epidemiology are well illustrated by the case-control research on curd and chilli consumption [8]. Ayurvedic notions of *Ushna*, *Ruksha*, and *Kapha*-aggravating chemicals are reflected in foods identified as risk factors in biomedical study. This suggests that ancient dietary guidelines may still be relevant in the prevention of colorectal cancer today.

### Ayurvedic Medicine-Adjunctive Potential

Ayurvedic medicine like curcumin, *Triphala*, and *Madhuyasti* have preclinical research that suggests the following possible mechanisms:

Inhibition of focal adhesion kinase (FAK) and alteration of inflammatory pathways, a decrease in the number of polyps and tumors. Even though these results are early, they show that Ayurvedic medicines may be used as a complementary therapy to improve quality of life, reduce side effects, and maintain digestive and metabolic integrity while receiving conventional cancer treatment.

### Limitations

Several limitations exist in the current evidence base:

1. **Limited Clinical Trials:** Most data derive from preclinical, in-silico, or single-case reports.
2. **Standardisation Issues:** Variability in herbal formulations, dosing regimens, and preparation methods limits reproducibility.
3. **Safety Considerations:** Potential herb-drug interactions and variation in therapeutic modalities necessitate careful integrative management.
4. **Lack of Long-Term Outcome Data:** Evidence for sustained tumour suppression or survival benefit remains limited.

### Future Directions

To realize the potential of Ayurvedic approaches in CRC, the following research priorities are recommended:

1. **Robust Clinical Trials:** Evaluating preventive and adjunctive interventions in high-risk populations, including individuals with adenomas, inflammatory bowel disease, or hereditary syndromes (e.g. Lynch syndrome).
2. **Standardization and Safety Profiling:** Developing uniform formulations, quality control, and dosing guidelines.
3. **Mechanistic Biomarkers:** Investigating effects on inflammation, gut microbiota, epigenetics, and metabolic pathways to elucidate modes of action.
4. **Protocolised Integrative Care:** Establishing models where oncologists and Ayurvedic physicians collaborate, ensuring safe, evidence-informed adjunctive care.

### Implications for Practice

Practical applications may include:

- Dietary-lifestyle counselling guided by Ayurvedic principles.
- Monitoring and supporting digestive/metabolic function (*Agni/Srotas*).
- Adjunctive use of ayurvedic medicine to mitigate chemotherapy-induced toxicity and support recovery [6,10].
- Collaborative care frameworks integrating conventional and Ayurvedic approaches for holistic patient management.

### CONCLUSION

A supplementary lens for comprehending tumor pathophysiology as a systemic process resulting from *Dosha* imbalances, *Dhatu* dysfunction, *Srota* blockage, *Agni* derangement, and *Ama* buildup is offered by the Ayurvedic perspective on colorectal cancer. Although it is still in its early stages, current research points to possible applications of Ayurvedic lifestyle modifications, dietary recommendations, and Ayurvedic Medicine in the prevention and supportive treatment of colorectal cancer.

- Improving primary prevention through dietary and lifestyle changes is one potential benefit of combining Ayurveda with traditional oncology.
- Reducing adverse effects from radiation and chemotherapy.
- Improving CRC patients' general quality of life and potentially their clinical results.

To prove effectiveness, guarantee safety, and convert Ayurvedic insights into evidence-based practice, however, strong clinical research, intervention standardization, and protocolized integrative care models are necessary. Integrative frameworks may provide long-term, comprehensive methods for lowering the incidence of colorectal cancer worldwide by bridging the gap between conventional wisdom and contemporary biomedical science.

## REFERENCES

1. Tripathy, R., & Das, N. P. (2017). Cancer– An Ayurvedic perspective and overview. International Journal of Applied Ayurved Research, 2(11), 1496–1502.
2. Mohamed Muzzammel S, Bhumika S, Dhivyashri S. Ayurvedic perspective on Cancer: Conceptualization and Treatment. J Ayurveda Integr Med Sci [Internet]. 2025 Jan. 6 [cited 2025 Nov. 8];9(10):95-8. Available from: <https://jaims.in/jaims/article/view/3690>
3. Chaurasiya, M. K., Jain, N., Maurya, A., & Gupta, S. J. (2021). Study the frequency of colorectal carcinoma in anorectal OPD of Department of Shalya Tantra S. S. Hospital, BHU: An overview. Journal of Ayurveda and Integrated Medical Sciences, 6(4), 75-81.
4. Rathod, S. S., Mishra, B. R., & Mishra, A. B. (2023). Ayurveda for Cancer therapy – A Review. Journal of Ayurveda and Integrated Medical Sciences, 8(5), 193-196. <https://doi.org/10.21760/jaims.8.5.32>
5. Gingras, D., & Béliveau, R. (2011). Colorectal cancer prevention through dietary and lifestyle modifications. Cancer Microenvironment, 4(2), 133-139. <https://doi.org/10.1007/s12307-010-0060-5>
6. Sharma, P., & Kajaria, D. (2020, May 31). Role of Kalpa Chikitsa in the management of Lynch syndrome-A case report. Journal of Family Medicine and Primary Care, 9(5), 2487–2491. [https://doi.org/10.4103/jfmpc.jfmpc\\_161\\_20](https://doi.org/10.4103/jfmpc.jfmpc_161_20)
7. Kumar, R., Verma, H., Ali, M., Midha, T., Kumar, D., & Jha, S. K. (2025). Review of mitigating cancer risk through Ayurvedic practices: A holistic approach to combating sedentarism. Ayush Journal of Integrative Oncology, 2(2), 86-90. [https://doi.org/10.4103/ajio.ajio\\_12\\_25](https://doi.org/10.4103/ajio.ajio_12_25).
8. Sardeshmukh S, Deshmukh V, Godse V, Gujar S, Dalvi S, Kulkarni S, Bhuvad S, Sardeshmukh N, Sardeshmukh B, Deshpande D, Awalkanth V, Salunkhe A, Redekar A, Vaidya S, Chavan S. Ayurvedic perspective of dietary risk factors of colorectal cancers - A hospital-based case control study. J Ayurveda Integr Med. 2024 Nov-Dec; 15(6): 100969. doi: 10.1016/j.jaim.2024.100969. Epub 2024 Nov 21. PMID: 39577139; PMCID: PMC11617946.
9. Srivedha, P., Umabarathi, V., Muhilan, B. M., & Ravikumar, P. (2023). Finding focal adhesion kinase inhibitors from Indian medicinal plants for colorectal cancer – an in-silico approach. Journal of Ayurvedic and Herbal Medicine, 9(2), 56–65.
10. Divya, P. (2025). Ayurvedic management of chemotherapy induced adverse effects in sigmoid colon carcinoma – a case report. J Ayurveda Integr Med, 16(3), 101112.
11. Weng W, Goel A. Curcumin and colorectal cancer: An update and current perspective on this natural medicine. Semin Cancer Biol. 2022 May; 80: 73-86. doi: 10.1016/j.semcancer.2020.02.011. Epub 2020 Feb 20. PMID: 32088363; PMCID: PMC7438305.
12. Wu Z, Li Y, Zhang Y, Hu H, Wu T, Liu S, Chen W, Xie S, Lu Z. Colorectal Cancer Screening Methods and Molecular Markers for Early Detection. Technol Cancer Res Treat. 2020 Jan-Dec; 19: 15330338 20980426. doi: 10.1177/15330338 20980426. PMID: 33353503; PMCID: PMC7768867.

## Cite this article as:

Ray Singh, B. Swapna. Colorectal Cancer from an Ayurvedic Perspective: Integrative Review. International Journal of Ayurveda and Pharma Research. 2025;13(10):133-137.

<https://doi.org/10.47070/ijapr.v13i10.3868>

Source of support: Nil, Conflict of interest: None Declared

## \*Address for correspondence

**Dr. Ray Singh**

PG Scholar,  
Department of Shalya Tantra,  
National Institute of Ayurveda,  
Jaipur, Rajasthan.

Email: [raysinghdhawal@gmail.com](mailto:raysinghdhawal@gmail.com)

Disclaimer: IJAPR is solely owned by Mahadev Publications - dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJAPR cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJAPR editor or editorial board members.