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Colon Cancer Diagnosis and Therapy Vol. 3

 Springer

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Table of contents (19 chapters)

Search within book

← Previous Page **1** of 2 Next →

Front Matter

[PDF](#) ↓

Pages i-xvi

Updates on Clinical Trials in Diagnosis and Therapy of Colorectal Cancer

Farhan Ullah, Hariharasudan Mani, Maha Wazir, Sana Hussain, Saeed Ali, Sarfraz Ahmad
Pages 1-19

Wnt Signaling-Related Long Noncoding RNAs: Critical Mediators of Drug Resistance in Colon Cancer

P. Vasudeva Raju, RamaRao Malla
Pages 21-39

The Triad of Estrogen, Estrogen Receptors, and Colon Cancer

K. R. Sumalatha, Syamala Soumyakrishnan, M. Sreepriya
Pages 41-67

Clinical Significance of Genetic Variants in Colon Cancer

Irina Nakashidze, Nina Petrović, Nino Kedelidze, Begum Dariya
Pages 69-91

Role of Nano-immunotherapy in Colorectal Cancer: An Updated Review

Devanabanda Mallaiah, Ramakrishna Vadde
Pages 93-103

Mechanistic Exploration and Therapeutic

Management of Colon Cancer Metastasis

Anupam Kumar Srivastava
Pages 105-121

Chemoresistance in Colorectal Malignancies: Molecular Mechanisms and Strategies to Overcome.

Henu Kumar Verma, Yashwant Kumar Ratre, Pellegrino
Mazzone
Pages 123-141

Therapeutic Intervention of Signaling Pathways in Colorectal Cancer

Vikas Chandra, Ashutosh Tiwari, Rajat Pratap Singh, Kartiki V.
Desai
Pages 143-171

Targeting Pathogenic Inflammation for Therapeutic Intervention Against Colon Cancer

Julia Fleecs, Eden Abrham, Mikale Kuntz, M. Nadeem Khan,
Ramkumar Mathur
Pages 173-191

Role of Tumour-Associated Macrophages in Colon Cancer Progression and Its Therapeutic Targeting

Arundhati Mehta, Vivek Kumar Soni, Yashwant Kumar Ratre,
Ajay Amit, Dhananjay Shukla, Ajay Kumar et al.
Pages 193-215

Advances in Chemoradiotherapy for Treatment of Colon Cancer

V. K. Patel, H. Rajak
Pages 217-239

Cytotoxic and Chemopreventive Activity of Polyphenols and Their Derivatives in Colon Cancer

Harit Jha, Ragini Arora
Pages 241-275

Prevention and Management of Colon Cancer by Nutritional Intervention

Vibha Sinha, Sapnita Shinde, Vineeta Dixit, Atul Kumar Tiwari, Ashwini K. Dixit, Naveen Kumar Vishvakarma et al.

Pages 277-306

Role of Food Additives and Intestinal Microflora in Colorectal Cancer

Vivek Kumar Soni, Ajay Amit, Vikas Chandra, Pankaj Singh, Pradeep Kumar Singh, Rudra Pratap Singh et al.

Pages 307-324

Effect of Milk and Dairy Products in Colorectal Cancer

Sarang Dilip Pophaly, Soumitra Tiwari, Awadhesh Kumar Tripathi, Manorama

Pages 325-337

Development of RNA-Based Medicine for Colorectal Cancer: Current Scenario

Ajay Amit, Sudhir Yadav, Rajat Pratap Singh, Chanchal Kumar

Pages 339-360

Bacterial Cancer Therapy: Promising Role in the Treatment of Colon Cancer

Rishi Srivastava, Shweta Sonam, Naveen Kumar Vishvakarma, Rajesh Sharma, Shree Prakash Tiwari

Pages 361-382

Antineoplastic Effects of Curcumin Against Colorectal Cancer: Application and Mechanisms

Vivek Kumar Soni, Arundhati Mehta, Yashwant Kumar Ratre, Chanchal Kumar, Rajat Pratap Singh, Abhishek Kumar Srivastava et al.

Pages 383-426

Role of Chemokines in Colorectal Cancer

Manisha Mathur, Sonal Gupta, Beiping Miao, Prashanth Suravajhala, Obul Reddy Bandapalli

Pages 427-439

AU1 **Antineoplastic Effects of Curcumin** 1
Against Colorectal Cancer: Application 2
and Mechanisms 3

Vivek Kumar Soni, Arundhati Mehta, Yashwant Kumar Ratre, 4
Chanchal Kumar, Rajat Pratap Singh, Abhishek Kumar Srivastava, 5
Navaneet Chaturvedi, Dhananjay Shukla, Sudhir Kumar Pandey, 6
and Naveen Kumar Vishvakarma 7

AU2 **Abstract** Curcumin is one of the major bioactive metabolites of turmeric, a spice 8
AU3 component common in southeast Asia. Curcumin is known for its anti-inflammatory 9
AU4 and antineoplastic activities against malignancies of a variety of origins. Colorectal 10
cancer is one of the major deadly malignancies. Various strategies have been imple- 11
mented to treat colorectal cancer; however, they have their own limitations, ranging 12
from nonspecific toxicities to onset of chemoresistance. Drugs of herbal origins 13
have some advantages over conventional therapeutic approaches. Colorectal cancer 14
is no exception; herbal drugs (including curcumin) have proven to be effective for 15
therapeutic applications. Curcumin can alter the molecular expression profile and 16
AU5 ~~halt~~ the rapid pace of cell division in colon malignancies. Metabolic alterations 17
driven by curcumin modulate cellular physiology in neoplastic cells. Curcumin can 18
alter the cell cycle and expression of cell death regulatory molecules. Curcumin has 19
been shown to have a chemosensitizing action in colorectal cancer. Epigenetic mod- 20
ifications by curcumin in colon cancer cells can lead to inhibition of colon cancer 21

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