

**Name of Journal:** *World Journal of Gastrointestinal Oncology*

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**Manuscript Type:** REVIEW

**Hypoxia and its impact on the tumour microenvironment of gastroesophageal cancers**

Hypoxia and gastroesophageal cancer

### Abstract

The malfeasant role of the hypoxic tumour microenvironment (TME) in cancer progression was recognised decades ago but the exact mechanisms that augment the hallmarks of cancer and promote treatment resistance continue to be elucidated. Gastroesophageal cancers (GOCs) represent a major burden of worldwide disease, responsible for the deaths of over 1 million people annually. Disentangling the impact of hypoxia in GOCs enables a better overall understanding of the disease pathogenesis while shining a light on novel therapeutic strategies and facilitating precision treatment

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## The hypoxic tumour microenvironment

<https://pubmed.ncbi.nlm.nih.gov/29362402>

In addition to the impact on tumour cell biology, the influence that hypoxia exerts on the surrounding cells represents a critical step in the tumorigenic process. Hypoxia indeed enables a number of events in the tumour microenvironment that lead to the expansion of aggressive clones from heterogeneous tumour cells and promote a lethal phenotype.

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Publish Year: 2018

## The role of hypoxia in the tumor microenvironment and ...

<https://cancerbiomedcentral.com/articles/10.1186/s12935-020-01719-5> ▾

The effect of hypoxia on cancer stem cells There is mounting evidence that hypoxia affects the maintenance and functions of CSCs. CSCs constitute an undifferentiated stem-like cell subpopulation within the tumor heterogeneous cell types, which contributes to cancer initiation, progression, metastasis, therapeutic resistance and cancer relapse.

## Hypoxic tumor microenvironment: Implications for cancer ...

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Hypoxia contributes to tumor aggressiveness and promotes growth of many solid tumors that are often resistant to conventional therapies. In order to achieve successful therapeutic strategies targeting different cancer types, it is necessary to understand the molecular mechanisms and signaling pathways that are induced by hypoxia.

Author: Sukanya Roy, Subhashree Kumaravel...

Publish Year: 2020

## Impact of hypoxic tumor microenvironment and tumor cell ...

<https://www.sciencedirect.com/science/article/pii/S0304383519303167>

Aug 28, 2019 - Hypoxia contributes to the immunosuppressive tumor microenvironment in many cancers by activating intrinsic mechanisms that allow tumor cells to escape from the innate and adaptive immune defenses. Moreover, several lines of evidence suggest that the establishment of this immunosuppressive microenvironment could be attributed to the ability of hypoxia to regulate ...

Cited by: 23

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Jul 01, 2018 · **Perinephric urinomas** commonly arise following traumatic **injury** or high-grade obstruction from kidney stones or **lower urinary tract** disorders. Not only are spontaneous urinomas rare in the pediatric population, but malignancy **presenting** with **perinephric urinomas** have only been described in the adult population.

**Cited by:** 1

**Author:** Julie W. Cheng, Ashley Li, David A. Chambe...

**Publish Year:** 2018

## "The creeping tumor:" An unusual presentation of upper ...

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Urothelial malignancy involving the entire **upper urinary tract** is an extremely rare entity. Most **upper urinary tract** malignancies are transitional cell carcinomas (TCC), of which the sarcomatoid variant is very rare. These tumors pose a challenge to the radiologist. We herein **report a case** of TCC involving the entire collecting system of the ...

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In addition to the **impact** on **tumour cell** biology, the influence that **hypoxia** exerts on the surrounding cells represents a critical step in the tumorigenic process. **Hypoxia** indeed enables a number of events in the **tumour microenvironment** that lead to the expansion of aggressive clones from heterogeneous **tumour cells** and promote a lethal phenotype.

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### [Hypoxic tumor microenvironment: Implications for cancer ...](#)

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**Hypoxia** contributes to **tumor** aggressiveness and promotes growth of many solid **tumors** that are often resistant to conventional therapies. In order to achieve successful therapeutic strategies targeting different **cancer** types, it is necessary to understand the molecular mechanisms and signaling pathways that are induced by hypoxia.

**Author:** Sukanya Roy, Subhashree Kumaravel, A...      **Publish Year:** 2020

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- How does hypoxia affect cancer? 
- What is hypoxic tumour microenvironment? 
- How does the hypoxic microenvironment affect the immune system? 
- How does hypoxia lead to a lethal phenotype? 

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<https://www.nature.com/articles/s41389-017-0011-9>

Jan 24, 2018 · **Hypoxia** and hypoxia-inducible factors The major components of the **tumour microenvironment (TME)** are blood vessels, lymphatic vessels, fibroblasts, immune cells and chemico-physical components such...

**Cited by:** 303      **Author:** Varvara Petrova, Margherita Annicchiarico-...

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