



Hydrogel for Cancer Therapy

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Recently, researchers have developed an **injectable hydrogel** for **localised cancer treatment**.

- The hydrogel acts as a **stable reservoir** for [anti-cancer drugs](#), releasing them in a **controlled manner** to target cancer cells while **sparing healthy ones** and reducing side effects.
- The **hydrogel**, made of **biocompatible** and [biodegradable](#) **ultra-short peptides**, responds to elevated **glutathione (GSH)** levels, a molecule abundant in tumour cells.
- The hydrogel ensures **localized drug delivery** to the **tumour site**, improving treatment precision.
 - **Conventional chemotherapy** and surgery harms **healthy cells** while treating cancerous cells.
- Hydrogels are **water-based, three-dimensional polymer networks** capable of **absorbing and retaining fluids**.
 - Their unique structure **mimics living tissues**, making them suitable for biomedical applications.

Read More: [Novel Hydrogel to Remove Microplastics](#)

PDF Reference URL: <https://www.drishtiias.com/printpdf/hydrogel-for-cancer-therapy>