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Autophagy and cancer treatment: four functional forms of autophagy and their therapeutic applications

Keywords: Autophagy, Cancer treatment, Different functions, Cell death modes

Research Summary

This review provides an overview of recent insights into the evolving relationship between autophagy and cancer treatment, and summaries the key roles played by autophagy in the following aspects:

- **cytoprotective (cell survival)**
- **cytotoxic (cell death)**
- **cytostatic (growth arrest)**
- **nonprotective (no contribution to cell death or survival)**

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Innovation points

Introduction **of autophagy can be divided into four main forms: cytoprotective (cell survival), cytotoxic (cell death), cytostatic (growth arrest) and nonprotective (no contribution to cell death or survival) .**

Summary **of the interaction between autophagy and other cell death modes, including apoptosis, cellular senescence, mitotic catastrophe, ferroptosis, necroptosis and pyroptosis.**

Emphasis **of cancer type, drug therapy and autophagy should be evaluated before autophagy is used as a tumor therapeutic target.**

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