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## Review

### Photodynamic therapy and diagnosis: Principles and comparative aspects

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#### Highlights

- Photodynamic therapy (PDT) is a non-invasive method of treating superficial tumours that carries minimal risk of toxicity.
- Because of their selective accumulation, fluorescent photosensitiser dyes can also be used to visualise tumour tissues.
- This article provides a comparative review on the technique and current applications of PDT in human and veterinary medicine.

#### Abstract

Photodynamic therapy (PDT) is an evolving method of treating superficial tumours that is non-invasive and carries minimal risk of toxicity. It combines tumour-selective photosensitiser dyes, tissue oxygen and targeted illumination to generate cytotoxic reactive oxygen species (ROS) within the tumour. In addition to directly acting on tumour cells, PDT damages and restricts tumour microvasculature, and causes a local inflammatory response that stimulates an immune response against the tumour. Unlike surgery or radiotherapy, the surrounding extracellular matrix is

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