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Photodynamic therapy

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Overview

Photodynamic therapy is a two-stage treatment that combines light energy with a medicine called a photosensitizer. The photosensitizer kills cancerous and precancerous cells when activated by light, usually from a laser.

The photosensitizer is nontoxic until it is activated by light. After light activation, however, the photosensitizer becomes toxic to the targeted tissue.

Several photosensitizer drugs are available today to treat many conditions, including acne, psoriasis, age-related macular degeneration and several types of cancer.

In addition to treating these conditions, photodynamic therapy also helps treat bacterial, fungal and viral infections. Studies have shown that this light-based therapy can trigger the body's immune response, giving the body another means to help destroy cancerous and precancerous cells.



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Why it's done

Photodynamic therapy is used to treat a variety of conditions, including:

- Pancreatic cancer.
- Bile duct cancer, also known as cholangiocarcinoma.
- Esophageal cancer.
- Lung cancer.
- Head and neck cancers.

- Certain skin diseases, including acne, psoriasis, nonmelanoma skin cancer and precancerous skin changes, known as actinic keratosis.
- Bacterial, fungal and viral infections.

By Mayo Clinic Staff

Photodynamic therapy care at Mayo Clinic

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June 25, 2024

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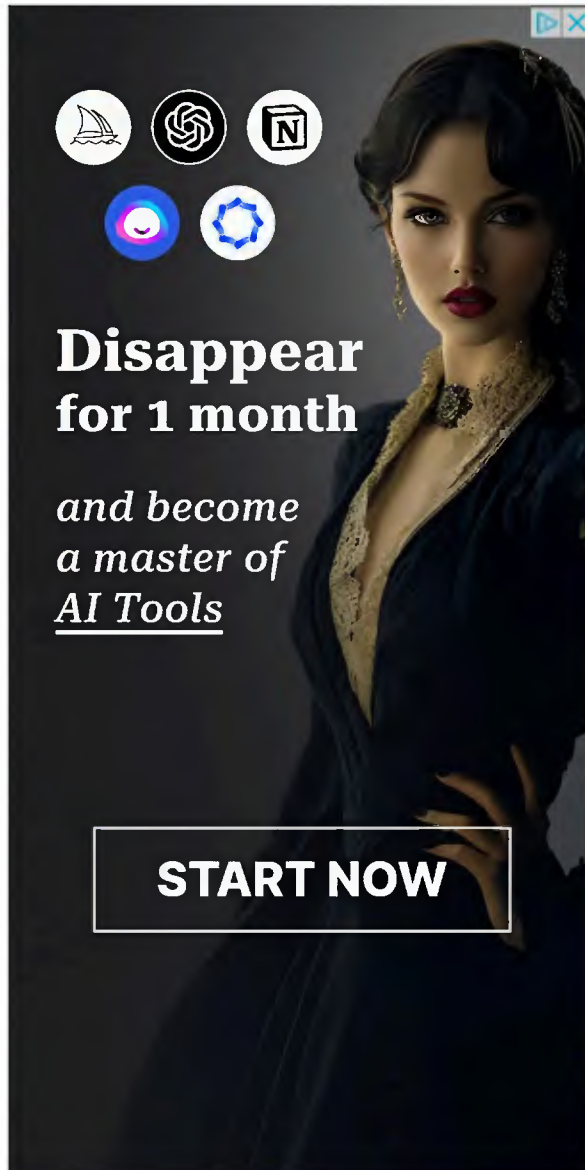
[Actinic keratosis](#)

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