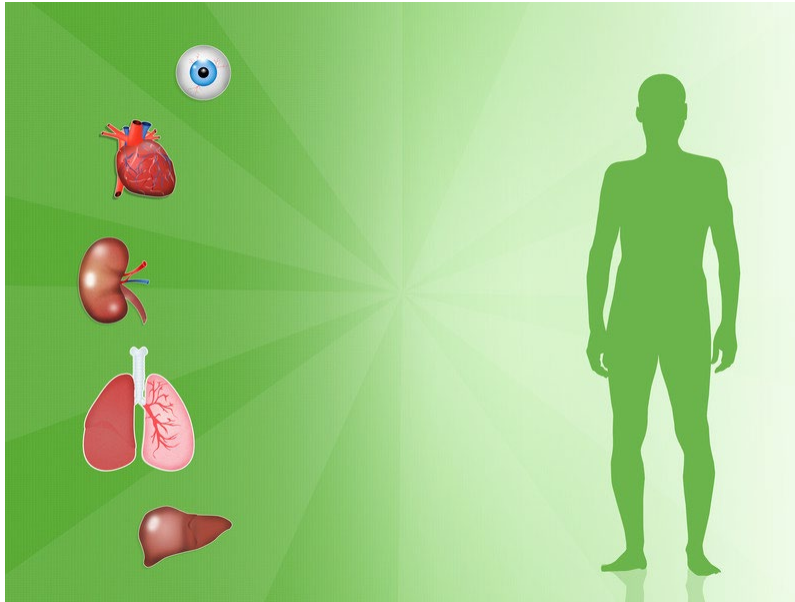


Word for Word

Orthotopic or orthotropic?



The words *orthotopic* and *orthotropic* look similar, but in cancer research and care, *orthotopic* is usually the correct choice.

Orthotopic means "of or relating to the grafting of tissue in a natural position."¹ In *orthotopic* transplantation, an organ or tissue is transplanted into the normal location in the body. In an *orthotopic* tumor model, tumor cells are implanted in the relevant organ of an animal.

Examples:

The patient underwent orthotopic liver transplantation, in which his liver was removed and replaced with a donor's.

Cell lines derived from human breast cancer specimens can be injected orthotopically into mouse mammary glands to create tumors that mimic human breast cancer.

The word *orthotropic* is more common in other fields. In botany, it refers to a

vertical direction of plant growth. In materials science, it refers to the orientation of materials: "... relating to properties (such as strength, stiffness, and elasticity) that are symmetric about two or three mutually perpendicular planes".² Finally, Orthotropics has been trademarked as a branch of dentistry involving guidance of facial growth.

Caution: The Microsoft Word spellchecker defaults to changing *orthotopic* to *orthotropic*. In most cases, you want to ignore that suggestion. Instead, add *orthotopic* to your Word dictionary.

References

1. Merriam-Webster. Orthotopic. <https://www.merriam-webster.com/medical/orthotopic>. Accessed February 6, 2019.
2. Merriam-Webster. Orthotropic. <https://www.merriam-webster.com/dictionary/orthotropic>. Accessed February 6, 2019.

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