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The study of human tissue by the positron and positronium probes

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The Positron Annihilation Lifetime Spectroscopy (PALS) was used to investigate the uterine leiomyomatis, ovary, oviduct and normal tissues taken from patients after surgery, hysterectomy. The pilot studies have shown that a positron probe, commonly used in the PET imaging, may be useful in identifying not only the position of affected tissue, but also the degree and type of these disease. Significant differences between normal and diseased tissues in all PALS parameters (lifetimes and intensities) were observed. For all studied patients it was found that the values of the free annihilation and orthopositronium lifetime are larger for the tumorous tissues than for the healthy ones.

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