







Special Issue Reprint

Optical Diagnostics in Human Diseases

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Optical technologies provide unique opportunities for the diagnosis of various pathological disorders. The range of biophotonics applications in clinical practice is considerably wide given that the optical properties of biological tissues are subject to significant changes during disease progression. Due to the small size of studied objects (from μ m to mm) and despite some minimum restrictions (low-intensity light is used), these technologies have great diagnostic potential both as an additional tool and in cases of separate use, for example, to assess conditions affecting microcirculatory bed and tissue viability. This Special Issue presents topical articles by researchers engaged in the development of new methods and devices for optical non-invasive diagnostics in various fields of medicine.

Several studies in this Special Issue demonstrate new information relevant to surgical procedures, especially in oncology and gynecology. Two articles are dedicated to the topical problem of breast cancer early detection, including during surgery. One of the articles is devoted to urology, namely to the problem of chronic or recurrent episodic urethral pain. Several works describe the studies in otolaryngology and dentistry. One of the studies is devoted to diagnosing liver diseases. A number of articles contribute to the studying of the alterations caused by diabetes mellitus and cardiovascular diseases. The results of all the presented articles reflect novel innovative research and emerging ideas in optical non-invasive diagnostics aimed at their wider translation into clinical practice.



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