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Prostate cancer: the need for biomarkers and new therapeutic targets

前列腺癌：亟待肿瘤标志物和治疗新靶点

Key words: Prostate cancer (PCa), Biomarker, Androgen, Estrogen, Cell signaling pathway, Therapeutical target

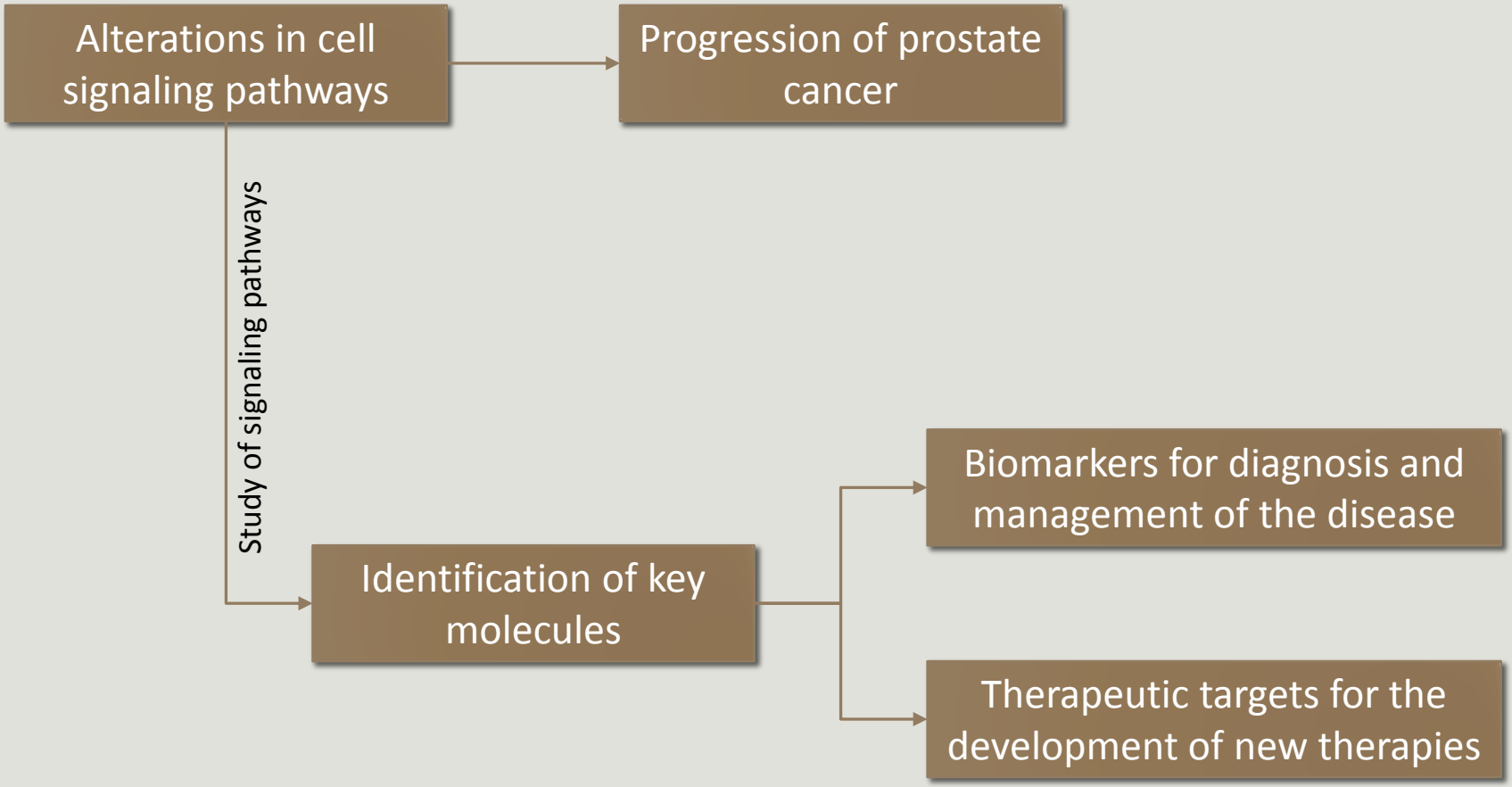
关键词：前列腺癌；肿瘤标志物；分子信号通路；治疗新靶点

- Prostate cancer (PCa) incidence has been increasing and several doubts remain to be elucidated in terms of pathogenesis, diagnosis, and treatment.

- Atypical small acinar proliferation, proliferative inflammatory atrophy, and prostatic intraepithelial neoplasia are currently pointed as possible precancerous lesions. Several molecular changes are on the basis of prostate cancer progression which rapidly metastasizes.

- Alterations in cell signaling pathways have been extensively linked to the onset and progression of prostate cancer. In addition to the notorious change in the androgens signaling, changes in estrogens, TGF-β, PI3K/Akt, EGF, FGF, VEGF, interleukins, and phosphatases have also been reported.

- The study of the signaling pathways involved in prostate cancer enable the identification of key molecules that might be used as biomarkers and/or therapeutical targets specific and sensible enough to overcome the disadvantages of the methods currently available.


Alterations in cell signaling pathways
Progression of prostate cancer
Study of signaling pathways
Identification of key molecules
Biomarkers for diagnosis and management of the disease
Therapeutic targets for the development of new therapies