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Third generation aromatase inhibitors and inactivators in the treatment and prevention of breast cancer

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Third generation type I steroidal irreversible aromatase inactivators and type II non-steroidal reversible aromatase inhibitors are, 100 to 1000 times more potent compared with the original non-steroidal aromatase inhibitor aminoglutethimide. They are completely selective and induce seldom, moreover mild to moderate adverse events (hot flushes, nausea, fatigue), and are generally well tolerated by compliant patients. They induce a quite maximal inhibition of aromatisation, a suppression of levels of circulating oestradiol and oestrone beyond the limits of detection, a suppression of levels of circulating oestrone sulphate by more than 90% and an inhibition of the production of oestrogens in ovaries, in normal as well as in cancerous mammary tissue and in other peripheral organs. In second- and third-line hormonal treatment of advanced breast cancer, individual products have been able to demonstrate markedly improved outcomes in comparison to treatment by means of progestins. Individual studies, not only in menopausal but even in younger patients, observed improvements in objective response and overall success rate, in median duration of response and overall success and in median time to progression. In one study in second-line treatment, a statistically significant benefit in terms of overall survival has been demonstrated with exemestane. Use of aromatase inactivators and inhibitors is currently studied also in first-line treatment of advanced breast cancer, in adjuvant and neo-adjuvant approach of early breast cancer, as well as chemoprevention in women at risk. The aromatase inactivators (formestane and exemestane) produce a different pharmacological effect on aromatase within the tumour compared with the aromatase inhibitors (anastrazole, letrozole). Formestane must be administered intramuscularly for optimal biochemical and clinical effects whereas exemestane with a half-life of approximately 24 h, can be administered once daily, orally.

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Abstract: P24

Expression of oestrogen receptor α (ERα) and β1 (ER-β1) in endometrial adenocarcinoma

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1. Introduction

Endometrial adenocarcinoma is generally known to be hormone-dependent. It is dependent both on oestrogens and progestagens. Expression of the classic oestrogen receptor (ER) differs in various patients, but is not connected with their age. After cloning the β form of ER [1] from a rat's prostate, and then from human testis, and after the possibility of the interaction between α- and β-receptors (ERs) — following the stimulation of receptors with 17β oestradiol — was described, it has become known that α can act as an activator of transcription, and ERβ as its inhibitor. All this suggests that the evaluation of ERs expression is of great importance both in aetiology and in the

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