

## Abstract: P16

## Heterogeneous oestrogen- and progesterone-receptor expression in low-grade endometrial stromal sarcomas-implications for therapy

O. Reich <sup>a,\*</sup>, S. Regauer <sup>b</sup>, W. Urdl <sup>a</sup>

<sup>a</sup>Department of Obstetrics and Gynaecology, University of Graz, Austria

<sup>b</sup>Department of Pathology, University of Graz, Austria

### 1. Background

We retrospectively analysed the oestrogen receptors (ER) and progesterone receptors (PR) expression in 21 low-grade endometrial stromal sarcomas (LGSS).

### 2. Methods

Archival formalin-fixed and paraffin-embedded material was analysed by immunohistochemistry using monoclonal antibodies and the peroxidase-antiperoxidase method. A score was evaluated based on the ER/PR determination in breast carcinomas.

### 3. Results

We observed a heterogeneous expression of both receptors. LGSS showed positivity for ER in 15/21 (71%) and for PR in 20/21 (95%). High expression for ER was seen in 3/21 (14%) LGSS, medium expression in 4/21 (19%) LGSS and low expression in 8/21 (38%) LGSS. No staining for ER was observed in 6/21 (29%) LGSS which, however, were all positive for PR. PR was highly expressed in 8/21 (38%) LGSS, moderately in 10/21 (48%) LGSS and weakly in 2/21 (10%) LGSS. Negative staining for PR was observed in only 1/21 (5%) LGSS which was positive for ER.

### 4. Conclusions

Most LGSS express ER and PR. The heterogeneous expression of both sex steroid receptors offers the possibility of therapeutic intervention via receptor-adapted adjuvant, neoadjuvant or palliative hormone therapy for these neoplasms. We, therefore, propose that the receptor status should be routinely determined in every LGSS.

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\* Corresponding author.

E-mail address: olaf.reich@kfunigraz.ac.at (O. Reich).

## Abstract: P17

## Oestrogen and progesterone receptor expression in postmenopausal endometrial polyps and their surrounding endometrium

I. Thijs <sup>a,\*</sup>, P. Neven <sup>a</sup>, I. Van Hooff <sup>b</sup>, R. Tonglet <sup>c</sup>, Y. Van Belle <sup>a</sup>,  
X. De Muylder <sup>a</sup>, G. Vanderick <sup>a</sup>

<sup>a</sup>Department of Obstetrics and Gynaecology, Algemene Kliniek St Jan, Brussels, Belgium

<sup>b</sup>Department of Pathology, Algemene Kliniek, St Jan, Brussels, Belgium

<sup>c</sup>Unité d'Epidémiologie, Ecole Santé Publique, Univ. Cathol. Louvain, Brussels, Belgium

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\* Corresponding author.

## 1. Objectives

To examine the proportion of oestrogen (ER) and progesterone receptor (PR) expression in the glandular and stromal cells of endometrial polyps and surrounding endometrial tissue in postmenopausal women. To compare staining between both receptors in each cell layer, for each receptor between cell layers in each tissue, and for each receptor and per cell layer between polyps and surrounding endometrium. To examine the effects of hormone replacement therapy (HRT) on hormone receptor staining.

## 2. Methods

Endometrial polyps and surrounding endometrial tissue were hysteroscopically resected from 24 postmenopausal women; 13 were not and 11 were on HRT. Glandular and stromal cells of both tissues were immunocytochemically examined using the monoclonal antibodies, NCL-ER-6S11 for ER and NCL-PR-1Q6 for PR. Staining intensities for both receptors in each cell layer and for each receptor between cell layers of both polyps and surrounding endometrium were compared as were staining intensities for each receptor, layer per layer between the polyp and its surrounding endometrium. The effect of HRT on hormone receptor expression in both tissues was evaluated. SPSS release 9.0 for Windows was used for statistical analysis. Paired Student *t*-test (assuming normal distribution) or Wilcoxon test were used to compare receptor staining intensities.

## 3. Results

The ER and PR were present in three-quarters of the glandular cells of postmenopausal endometrial polyps and the surrounding endometrium. The stromal cells of both tissues expressed the ER in a similar proportion but the PR was expressed in only one-third of cases. Almost always, ER staining was more intense compared with PR expression but this was only significant in the stromal cell layer ( $P < 0.001$  in the polyp and  $P = 0.28$  for surrounding endometrium). Hormone receptor staining was more intense in the glandular part compared with the stromal part for both receptors and in both tissues ( $P = 0.014$  —  $P < 0.001$ ). For each receptor and per cell layer comparing the polyp with its surrounding endometrium, there was no difference in the intensities of receptor staining apart from for stromal cell ER staining where the polyps contain less ER than the surrounding endometrium ( $P = 0.04$ ). There was a trend towards more intense ER and PR staining in the polyps and surrounding endometrium from HRT-users apart from for the stromal PR where this trend was reversed; the effect of HRT on receptor expression, however, was never statistically significant.

## 4. Conclusion

Postmenopausal endometrial polyps and surrounding endometrium often show expression of ER and PR, although with varying intensities. ER stained more intensely than the PR but this was only significant in the stromal cells. In both tissues, glandular cells stained more intensively for the hormone receptors than the stromal cells. There is no difference in intensity of receptor staining comparing endometrial polyps with their surrounding endometrium apart for the ER in stromal cells of the polyps that stained less than the surrounding endometrium. HRT had no significant effect on hormone receptor expression in endometrial polyps and the surrounding endometrium.

Abstract: P18

# Oestrogen receptor is a critical component required for insulin-like growth factor (IGF)-mediated signalling and growth in MCF-7 cells

A.V. Lee<sup>a,\*</sup>, B.L. Guler<sup>a</sup>, X. Sun<sup>a</sup>, S. Oesterreich<sup>a</sup>, Q.P. Zhang<sup>a</sup>,  
E.M. Curran<sup>b</sup>, W.V. Welshons<sup>b</sup>

<sup>a</sup>Baylor College of Medicine, Breast Center, Houston, TX, USA

<sup>b</sup>University of Missouri-Columbia, Columbia, MO, USA

\* Corresponding author.

E-mail address: avlee@bcm.tmc.edu (A.V. Lee).