A phase II evaluation of gefitinib in the treatment of persistent or recurrent endometrial cancer: A Gynecologic Oncology Group study*

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Background

A phase II trial was performed to evaluate the efficacy and safety of gefitinib in patients with persistent/recurrent endometrial cancer.

Methods

Women with histologically confirmed persistent/recurrent endometrial cancer were treated with 500 mg oral gefitinib daily until progression or severe toxicity, with progression-free survival (PFS) at six months as the primary endpoint. Tumor expression of total epidermal growth factor receptor (EGFR), estrogen receptor (ER), progesterone receptor A (PRA) and B (PRB), Ki67, pEGFR and activated extracellular signal-regulated kinase (pERK) were examined pre- and post-treatment. EGFR was sequenced, and serum concentrations of soluble EGFR (sEGFR) at baseline also were examined.

Results

Of 29 patients enrolled, 26 were evaluable for efficacy and toxicity. Four patients experienced PFS≥6 months, and one had a complete response which was not associated with an EGFR mutation. The concentration of sEGFR in pretreatment serum was positively correlated with overall survival (OS), but not with responsiveness to gefitinib in this small patient cohort. Expression of tumor biomarkers was not associated with PFS or OS. Co-expression of ERwith PRA in primary and recurrent tumors, and pEGFRwith pERK in primary tumors was observed.

Conclusions

This treatment regimen was tolerable but lacked sufficient efficacy to warrant further evaluation in this setting. The possible association between serum sEGFR concentrations and OS, and temporal changes in expression of pEGFR and pERK and the documented CR of one patient are interesting and warrant additional investigation.

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