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# Dedifferentiated Mixed Stromal-Smooth Muscle Tumor of the Uterus. Report of a Case

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## Summary

So-called dedifferentiation in mesenchymal neoplasms of the uterus is very rare. Among conventional low-grade stromal tumors only three cases of dedifferentiation were reported, whereas in mixed stromal-smooth muscle tumors the dedifferentiation was yet not described. Here we present such a case of low-grade mixed stromal-smooth muscle tumor with dedifferentiation. The tumor occurred in 52-years-old postmenopausal patient. The high-grade component representing a dedifferentiation showed morphology of undifferentiated sarcoma with myxoid change. The low-grade component with morphology of mixed stromal-smooth muscle tumor was limited to a few peripheral areas of the lesion. Immunohistochemically, the low-grade component showed typical positivity for CD10, estrogen receptor, progesterone receptor, and focal reactivity for myoid markers, whereas the dedifferentiated component expressed only vimentin, CD10 and estrogen receptor. This case demonstrates that low-grade mixed stromal-smooth muscle tumor of the uterus can dedifferentiate like a pure stromal tumor. It shows that extensive sampling/histological search may be needed for recognition of a minor component in a dedifferentiated tumor.

**Key words:** uterus – mixed stromal-smooth muscle tumor – dedifferentiation – fibrous endometrial stromal tumor

## Súhrn

### Dediferencovaný zmiešaný stromálny-hladkosvalový tumor maternice. Popis prípadu

Zatiaľčo fenomén dediferenciácie je dobre známy v low-grade nádoroch mäkkých tkanív a kostí, u low-grade stromálneho tumoru maternice bol popísaný len v troch prípadoch a vždy šlo o dediferenciáciu v konvenčnom stromálnom tumore. V kazuistike prezentujeme prípad dediferenciácie v low-grade zmiešanom stromálnom-hladkosvalovom tumore maternice. Low-grade komponent bol nájdený fokálne v periférnej zóne high-grade stromálneho sarkómu. Prevládajúca high-grade zložka mala morfológiu nízko diferencovaného myxoidného sarkómu. Imunohistochemicky bol low-grade komponent pozitívny na CD10, vimentín, estrogénové a progesterónové receptory a miestami na myoidné markery. High-grade komponent exprimoval len vimentín, CD10 a progesterónové receptory. Prípad demonštruje, že zmiešaný low-grade stromálny-hladkosvalový tumor maternice môže dediferencovať podobne ako konvenčný stromálny tumor. Pre rozpoznanie dediferenciácie môže byť potrebný extenzívny sampling tumoru (kvôli zachyteniu minoritnej zložky), podobne ako tomu bolo v prezentovanom prípade.

**Kľúčové slová:** maternica – zmiešaný stromálny-hladkosvalový tumor – dediferenciácia – fibrózny endometriálny stromálny tumor

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## Introduction

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The coexisting of low-grade and high-grade tumor of the same origin in one tumor mass is well recognized especially in soft tissue and bone tumors, and it was termed dedifferentiation (7).

In uterine stromal tumor the dedifferentiation was described only very rarely (2, 13, 14), and it was not reported in mixed stromal-smooth muscle tumor to our knowledge. Here we present a case of high-grade stromal sarcoma that apparently has arisen inside the low-grade mixed stromal-smooth muscle tumor (9) through the process of dedifferentiation.