

Management of renal cell cancer bone metastasis — a case report on embolization and orthopaedic intervention

Dawid Sigorski^{1,2} , Rafał Kidziński³, Krzysztof Pyra⁴, Zbigniew Żęgota⁵, Grzegorz Kade⁶

¹Department of Oncology and Immuno-Oncology, Clinical Hospital of the Ministry of Internal Affairs and Administration with the Warmia-Mazury Oncology Centre, Olsztyn, Poland

²Department of Oncology, University of Warmia and Mazury in Olsztyn, Poland

³Diagnostic Imaging Department, Clinical Hospital of the Ministry of Internal Affairs and Administration with the Warmia-Mazury Oncology Centre, Olsztyn, Poland

⁴Department of Interventional Radiology and Neuroradiology, Medical University of Lublin, Poland

⁵Department of Orthopedics, Traumatology and Oncology of the Musculoskeletal system, Clinical Hospital of the Ministry of Internal Affairs and Administration with the Warmia-Mazury Oncology Centre, Olsztyn, Poland

⁶Clinical Hospital of the Ministry of Internal Affairs and Administration with the Warmia-Mazury Oncology Centre, Olsztyn, Poland

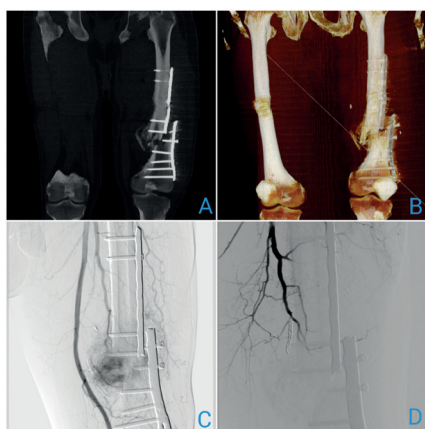


Figure 1. Computed tomography — pathological fracture and a broken stabilizing plate; **A.** 3D multiplanar reconstruction; **B.** 3D volumetric reconstruction. Digital subtraction arteriography; **C.** Metastatic tumour. Vascular supply from the deep femoral artery; **D.** Shadow of the embolization coil and effective occlusion of the tumour blood supply. Absence of flow in the distal segment of the deep femoral artery

We present the case of a 63-year-old man diagnosed with clear cell renal cell cancer (RCC) with multiple osteolytic bone metastases who was treated at our hospital. The patient underwent a pathological fracture of the left femur, surgically stabilized with a titanium plate in August of 2023. Due to the risk of spinal compression syndrome and pain, the pa-

tient underwent a palliative sacrum and Th8 radiotherapy. In October 2023, due to the destabilization of a surgical anastomosis of the femur, the patient was qualified for embolization, followed by orthopaedic surgery (Fig. 1A, B). The procedure involved puncturing the right femoral artery under local anaesthesia using the Seldinger method. A guidewire catheter was inserted on the left side. Pathological vessels supplying the richly vascularized tumour of the left thigh from the deep femoral artery were visualized. Embolization was performed using Embozene 700 µm microspheres for small pathological vessels (Fig. 1C). In the end, coils were used to close the bigger vessels. Control arteriography showed effective devascularization of the tumour (Fig. 1D). After two days, the patient underwent the removal of destabilized material from the femur with internal repositioning and stabilization with an intramedullary nail. No intraoperative complications occurred. Post-surgery, the patient was qualified for systemic therapy with ipilimumab and nivolumab as he belongs to the intermediate-risk group, according to the International Metastatic RCC Database Consortium [1].

References

1. Wysocki PJ, Chłosta P, Chrzan R, et al. Zalecenia postępowania diagnostyczno-terapeutycznego w raku nerkowokomórkowym — aktualizacja. *Onkol Prakt Klin Edu.* 2022; 8(6): 424–457.

How to cite:

Sigorski D, Kidziński R, Pyra K, Żęgota Z, Kade G. *Management of renal cell cancer bone metastasis — a case report on embolization and orthopaedic intervention.* *NOWOTWORY J Oncol* 2024; 74: 287.

This article is available in open access under Creative Common Attribution-Non-Commercial-No Derivatives 4.0 International (CC BY-NC-ND 4.0) license, allowing to download articles and share them with others as long as they credit the authors and the publisher, but without permission to change them in any way or use them commercially.