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REMS TECHNOLOGY IN DAILY PRACTICE: CLINICAL CASES**M. D. Tomai Pitinca¹, C. Caffarelli², S. Gonnelli²**¹National Research Council, Institute of Clinical Physiology, Lecce, ²Department of Medicine, Surgery and Neurosciences, University of Siena, Siena, Italy

Objective: Radiofrequency echographic multispectrometry (REMS) allows us to obtain the evaluation of BMD by performing an echographic scan on spine and hip. In our daily practice, it can be applied in clinical situations in which DXA could have limitations.

Methods: We present some clinical cases.

Results:

Case 1. A 73-year-old woman arrived to our clinic for follow-up. She presented a complete collapse of L1 and a vertebral wedge of D12 with accentuation of kyphosis. Bone densitometry showed osteoporosis at femoral neck and osteopenia at lumbar spine; the evaluation with REMS technology showed osteoporosis at both site. In this case probably the presence of vertebral collapses and the presence of artefacts due to arthritis results in an overestimation of the BMD performed by DXA which does not occur with REMS exam.

Case 2. We received a 79-year-old woman affected by spontaneous fracture of the left hip for evaluation of BMD. The patient underwent osteosynthesis with an endomedullary rod. The densitometric examination performed by DXA on spine and right hip (DXA scan on left hip cannot be performed due the presence of the endomedullary rod) shows an osteoporosis on both sites. The REMS examination performed on spine, right and left hip shows a diagnosis of osteoporosis on all analyzed sites, comparable to the DXA results. This case shows how REMS technology is able to automatically remove artefacts.

Case 3. A 76-year-old woman affected by osteoarthritis, with a double hip prosthesis, underwent DXA examination on the spine and on the wrist for the first time. The exam showed a diagnosis of mild osteopenia on the spine and a diagnosis of osteoporosis on the wrist. The exam performed on spine by REMS technology showed a diagnosis of osteoporosis totally comparable to the examination performed with DXA on the wrist.

Conclusion: These clinical cases show how REMS technology can be useful in the management of particular patients assuring an accurate evaluation of bone densitometry.