

## First Italian Bone Metastases Database: One-Year experience.

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**Introduction:** Bone metastases (BM) are still the main cause of morbidity and mortality in cancer patients, mostly due to their complications defined as skeletal-related event (SRE) consisting in pathological fractures, spinal cord compression, bone pain, bone marrow suppression, hypercalcemia. SRE reduce patients' quality of life and are associated with an increasing health costs. At present, data concerning BM are obtained retrospectively from monocentric experiences.

The aims of the BM database are to collect clinical prospective data in order to better understand the natural history of BM and to obtain information about SRE, to evaluate clinical and biological factors (objective response, bone pain, biomarker value) related both to the primary tumors and to the BM.

**Materials and Methods:** BM Database is a multicenter Italian prospective observational study using a web-based software supported by an open source package (Xampp). Demographic, clinical and pathological information were recorded, and updated every 6 months by the participating centers, in order to maintain a good quality.

**Results:** From 7 centres 262 patients have been included. For 173 patients included in the analysis (102 female and 71 male) data on bone metastasis were available. Median age was 62 years old (range 29-85). At the moment of first BM, 67% of the patients had a 0-1 ECOG performance status. About 49% of cases had breast as primary tumor, 21% lung, 17% prostate, 5% urinary tract and 8% other sites. About 54% had also visceral metastases. In 53% of cases BM were multiple (>6) at diagnosis, while in 31% were few metastasis (2-6) and in 16% were solitary lesions. Metastasis were axial in 45%, appendicular in 5%, and both in 42%. BM were widely lytic (39%), while 24% were sclerotic and 14% were mixed lesions. BM were histologically confirmed in 14% of cases. Seventy-three SRE were recorded in 63 patients: 71% radiotherapy, 22% pathological fractures, 4% surgery, 3% bone marrow suppression.

**Conclusions:** BM Data Base is the first Italian multicenter and perspective experience to study the natural history of BM from different neoplasia. The quality of collected data is a key element of this project. Further analysis of these data will provide information to better understand the frequency and clinical impact of BM, and also on the patients' quality of life and prognosis.

