

Patients referred to Dept. of Radiation Oncology meeting inclusion criteria

Stratification according to modified Mizumoto Score:

Type of primary tumor

Favourable (Breast, prostate and thyroid cancer (except anaplastic cancer). 0

Unfavorable 3

Karnofsky index ≤ 70 3

Visceral metastases 2

Previous chemotherapy 2

Hypercalcemia 2

Multiple bone metastases 1

Elderly (≥ 71 y) 1

Arm A: 0-4 points

10# x 3 /4.85

Arm B: 5-9 points

5# x 4/ 7 Gy

Initial assessment: Pain / Analgesics/ Quality of life

Treatment:

Imaging: CT and MRI T1 +/- contrast &T2; slice thickness max. 2mm

Target volume definition: Anatomical definition of PTV-boost as involved parts of vertebrae; PTV-elective as whole vertebrae

Treatment planning: VMAT > step-and-shoot IMRT

Treatment delivery: Daily cone-beam CT based IGRT in six degrees of freedom

Follow-up: Primary endpoint - pain response 3 months after radiosurgery