Conclusion: Non-pCR group showed significantly decreased 5-year OS and DFS rates than pCR group, especially in triple negative and HER2-enriched breast cancer patients. In the case of pCR, there was no difference in survival rates regardless of molecular subtypes. While a significant difference between survival rates and molecular subtypes was found in the patients who failed to attain pCR. Compared to luminal A, only triple-negative subtype was associated with distinctly decreased 5-year OS and DFS rates.

EP-1145
EBRT vs IORT for breast conserving therapy A large mature single institution matched-pair evaluation
V. Vanoni1, S. Bou Selman1, S. Mussari1, L. Menegotti1, A. Ferro1, A. Caldana1, M. Nagliati1, G. Berlanda1, C. Prezzi1, L. Tomio1
1Ospedale Santa Chiara di Trento, Radiation Oncology, Trento, Italy
2Ospedale Santa Chiara di Trento, Medical Physics, Trento, Italy
3Ospedale Santa Chiara di Trento, Oncology, Trento, Italy
Purpose or Objective: Comparative outcome data after intraoperative radiotherapy (IORT) and external beam radiotherapy (EBRT) for breast cancer at >5ys median follow-up are rare. We present a large, mature single-institution matched-pair-comparison reporting survival and recurrence-rates in patients treated with either modality.

Material and Methods: Complete datasets for 258 IORT-pts treated between 2000 and 2010 were matched with 258pts postoperatively treated with EBRT by age/histology/tumor size, grading/lymph-node-status/hormone-receptors/type of adjuvant therapy/surgical margins/treatment-date. EBRT was performed with 2 tangential fields to whole breast (50Gy/25fractions) and with 9-12MeV direct-electron-field-boosts to tumor bed (10-16Gy/5-8 fractions). A non-dedicated Linac (green-line-setup) with direct 8-12MeV electron fields (21Gy prescribed to 90%-isodose) delivered IORT. Relapse at surgical intervention site was classified as true local recurrence(LR). All recurrences in the treated breast (any quadrant) were classified as Ipsilateral Recurrence(IR).

Results: Median follow-up was 79 months (12-156) for both groups. IR were 11 after IORT and 6 after EBRT. LR for IORT and EBRT groups were 8 and 3, respectively. Cumulative incidence of IR at 5ys was 2.3%(IORT) and 1.4%(EBRT), (p=n.s., HR 1.8 CI 95% 0.69-5.5). Cumulative incidence of LR at 5ys was 1.5%(IORT) and 0.8%(EBRT), (p=n.s., HR 3.1 CI 95% 0.8-11.3) Overall survival(OS) at 3/5ys was 98.8%/96.1%(IORT) and 98.8%/95.3%(EBRT), (n.s.). Disease-free survival(DFS) at 3/5 yrs was 97.2%/93.2%(IORT) and 98%/93.5%(EBRT) (n.s.). Between IORT and EBRT, no differences in non-breast-cancer-related-deaths or second-cancer-incidence were recorded. When analyzed according to ASTRO-criteria for accelerated-partial-breast-irradiation(APBI), outcome was better in the APBI-suitable group than in the entire cohort and the APBI-unsuitable group. The IR at 5ys for APBI-suitable/cautionary/unsuitable were 0%/2.7%/8% respectively

Conclusion: In line with published randomized-trial-data, IR-rate was higher after IORT than after EBRT if no stringent patient selection was performed. Non-breast-cancer-mortality and second-cancer-incidence did not differ between IORT and EBRT. In patients suitable for APBI according to ASTRO-criteria, similar IR-, LR- and OS-data indicate that IORT is a viable alternative to EBRT.

EP-1146
Non-surgical therapy of early breast cancer with novel enzyme-targeting radiosensitisation
K. Kobayashi1, A. Nishikawa1, Y. Ogawa2, T. Yamagami1
1Kochi Medical School, Department of Radiology, Nankoku, Japan
2Kochi Health Sciences center, Radiation Oncology, Kochi-city, Japan
3Hyogo Prefectural Kokogawa Medical center, Radiology, Kokogawa-city, Japan
Purpose or Objective: The current standard treatment for early breast cancer is a combination of conserving surgery and endocrine therapy or that of endocrine therapy and chemotherapy or chemotherapy alone. Even after remarkable technical advances in breast cancer surgery, physical and mental invasion for patients after surgery is a problem to be solved. Also patients of dying from breast cancer for surgery denial exist. In this study, we evaluated the usefulness and safety of novel non-operative enzyme-targeting radiosensitization: Kochi Oxydol-Radiation Therapy for Unresectable Carcinoma, type II (KORTUC II) with endocrine therapy for stage I and II breast cancer.

Material and Methods: From October 2006 to September 2013, radiation therapy was performed for 44 women (median age 63 years ranging from 37 to 88 years) of breast cancer (Stage 0; n=2, Stage I; n=19, and stage II; n=23). All patients refused both surgery and systemic chemotherapy. Radiation therapy performed was 44Gy/16fr or 3.5W for total breast with field-in-field technique, then electron beam boost 9Gy / 3fr / 3days was added to the tumor bed. We injected the sensitizer (0.5% hydrogen peroxide solution + 0.83% sodium hyaluronate) under ultrasound guidance, before radiation therapy twice a week. Median follow-up period was 51 months (21-104 months). After the treatment, both PET-CT and breast MR were performed every year.

Results: About adverse event no skin symptoms more than grade3 was observed. Beauty effect was excellent or good in all cases. Local recurrence was seen in only 2 case (4.5%). Distant metastasis was not observed. Only one patient died from other disease.

Conclusion: From the results of this study it was suggested that KORTUC II followed by endocrine therapy is effective and safe as the therapy for stage I and II breast cancer.

EP-1147
Hypofractionation vs conventional radiotherapy: is there a difference in local recurrence?
R. Yadav1, P. Lal1, S. Agrawal1, M. Verma1, S. Misra1, K. Maria1, S. Senthil Kumar1, S. Kumar1
1Sanjay Gandhi Post Graduate Institute Of Medical Sciences, Radiotherapy, Lucknow, India
Purpose or Objective: Randomized trials have established the role of hypofractionated radiation therapy (HFRT) in early breast cancer. HFRT allows for less costly and more accessible treatment. However, there is paucity of data for HFRT in locally advanced breast cancer (LABC). We report the impact of HFRT in unslected breast cancer patients (all stages except metastatic, both BCS /MRM) and compared with CFRT for any differences in outcomes.

Material and Methods: 463 patients of BCS/MRM treated between Jan’08 and July’13 with CFRT (50Gy/ 25fr) or HFRT(42.4Gy/16 fr or 40Gy/15) to the breast/chest wall (CW) ± SCF ± Ax, treated in 2 time periods were retrospectively reviewed. RT was given by direct electron field/ bitangential photons to the CW and by latter to the breast. SCF ± Ax RT was given by enface photons (when indicated). All patients of BCS received a tumor bed boost. Statistical analysis to compare the 2 groups for survival outcomes, was done in Sept’15. The primary endpoint was to compare the differences in loco regional recurrences (LRR) between the 2 groups.