**Table 1:** Clinical study describing patient with radiogenic angiosarcoma (RAS) of the breast treated also with electrochemotherapy (ECT)

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **STUDY** | **Type of study** | **Patients** | **AGE** | **History** | **FIRST TREATMENT** | **LATENCY PERIOD**  **months** | **CLINICAL FEATURES** | **SKIN REGION** | **RE-TREATMENT** | **Histology** | **C myc amplification** |
| Cencelj-Arnez 2020  [16] | CR | 1 | 63 | Syncronus bilateral Luminal BC  (right breast) | Mastectomy +  6 cicles x 5-fluorouracil, epirubicin, Cyclophosphamide+  letrozole +  RT 25Gy | 60 | Ulcerated red lesion | Lower-medial quadrant  In right breast | Excision + ECT + doxorubicin | High grade RAS | Yes |
| Campana 2019  [19] | CS | 20  (10 breast RAS) | / | / | / | / | / | / | / | / | / |
| Benevento 2015  [20] | CR | 1 | 76 | Invasive ductal carcinoma Luminal BC (left breast)  pT1 pN0 M0 G2 | BCS +  50 Gy in 25 fractions of 200 cGy/daily with boost of 10 Gy in 5 fractions of 200 cGy/daily +  Tamoxifene | 48 | painful, violet, multi-nodular mass | Left>right breast | Excision +  Mastectomy (after 4 years)+ doxorubicin | grade-II RAS | / |
| Guida 2016  [20] | RS | 19  (6 breast RAS) | 69 | / | / | 96 | / | Scalp (5)  Breast (8)  Skin (3)  Soft tissue (3) | ECT (19/19)+  Surgery (17/19) + RT (5/19)  + CT (3/19) | RAS | / |
| Mocerino 2015  [26] | CR | 1 | 77 | invasive ductal carcinoma  pT1N0M0  ER +15%; PgR +30%; HER2 IHC 1+  (left breast) | BCL +  60 Gy in 30 fractions +  tamoxifen | 84 | ecchymotic lesion (1.3 cm) | near the scar | Excision +  left mastectomy (after 1 year)+ right mastectomy (after 2 years) +  ECT+  69 Gy +  Doxorubicin | low-grade RAS | / |
| Laurino 2022  [27] | CR | 1 | 61 | infiltrating ductal carcinoma, pT1cN0, grade G2, ER 98%, PGR 20%, HER2+,  left breast | BCL +  50 Gy in 25 fractions + 10 Gy in 5 fractions by photons+  Adjuvant CT +  letrozole | 72 | / | Left breast | Neoadjuvant CT + mastectomy (after 1 year) +  ECT+  Re-excision | high-grade RAS (G3), positive for Factor VIII and CD31, with extensive areas of necrosis and ulceration. | / |
| Laurino 2022  [27] | CR | 1 | 63 | infiltrating ductal breast cancer pT1cN1(1/18), G2,  ER: 90%, PGR: 60%, Ki67 index at 15%, and HER2 negative  Left breast | BCS+  5-fluorouracil, epidoxorubicin, and cyclophosphamide+  50 Gy in 25 fractions + 10 Gy in 5 fractions by photons+  letrozole | 108 | ulcerated and bleeding left breast lump, 7 cm in diameter, adherent to the chest wall | Left breast | Radiofrequency termoablation +  gemcitabine and docetaxel + ECT + | RAS | / |
| Parisi 2023 | CR | 1 | 59 | breast invasive ductal Luminal B carcinoma  pT1c N0 M0  (right breast) | BCL +  60 Gy in 30 fractions+  femara | 60 | exophytic lump | near the scar | Excision + right mastectomy +  Paclitaxel (doxorubicin contraindicated) + 40.5 Gy in 15 fractions + ECT | Grade II RAS | / |

CR= case report

CS= cohort study

Rs= retrospective study