

# Alopecia in women undergoing chemotherapy for breast cancer and use of scalp cooling device.

## Impact of Scalp Cooling Device (SCD) in preventing alopecia in women undergoing chemotherapy for breast cancer

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### Background

Alopecia (A) is a common and emotionally traumatic adverse effect for breast cancer (BC) patients (pts) undergoing chemotherapy (CT). Food and Drug Administration (FDA) cleared the DigniCap® SCD, for patients with breast cancer in 2015. This device was designed to reduce hair loss during chemotherapy. However, the impact of SCD in pts undergoing anthracycline and taxane-based sequential regimen is not entirely established. Thus, the aim of this analysis was to prospectively explore the role of SCD in a cohort of pts including also this regimen.

### Methods

From February 2016 to June 2018 patients with early/locally advanced breast cancer treated with neoadjuvant/adjuvant CT including anthracycline, taxane or both in sequential regimen were enrolled. The estimate of hair-loss was evaluated by photographs of the head using the Dean scale during and one month after the end of chemotherapy. Alopecia was graduated according to Dean scale: G0 = no A; G1 < 25% A; G2 = 25–50% A; G3 = 50–75% A; G4 > 75%. A score of 0-2 (≤ 50% hair loss) was defined as treatment success. Tolerability was defined as the percentage of patients who completed all chemotherapy cycles using the SCD. All patients received the Patient Symptoms Survey (self-reported). A database for individual data and information was appropriately fulfilled. Descriptive statistics was adopted.

### DigniCap Treatment Cycle



The chemotherapy agent is still active in the patient's bloodstream following the infusion. Therefore, the scalp cooling treatment continues for a cycle of post-infusion cooling. Depending on drug and dose, typically this will last from 90-180 minutes. [Courtesy of Dignitana]

Dignicap	Patients N° 123 Patients evaluable N°123
Median Age	44 (range: 24-74)
Epi/CPA+PTXw	85 (69.1%)
DTX/CPA	38 (30.9%)
Alopecia all grade	71 (57.0%)
Alopecia G0	52 (42.3%)
Alopecia G1-2	54 (43.9%)
Alopecia G3	17 (13.8%)
Treatment success	106 (86.2%)

### Results

A total of 123 pts were enrolled; 123 pts were evaluable for efficacy of Dignicap. Median age was 44 (range: 24-74). CT regimens included docetaxel/cyclophosphamide [DTX/CPA] (38 pts), epirubicin (90 mg/m<sup>2</sup>) and cyclophosphamide [EPI/CPA] (600 mg/m<sup>2</sup> iv) three weekly followed by 12 courses of paclitaxel [PTXw] (80 mg/m<sup>2</sup> iv weekly) (85 pts). Alopecia all grade was showed in 57.0% (n=71): G1 in 37 pts (30.1%) and G2 in 17 pts (13.8%). No hair loss in 52 pts (42.3 %). Treatment success was seen in 106 pts (86.6%). Toxicity included grade 1/2 headache in 56 pts (40.6%), cervical discomfort in 36 pts (29.3%), pain of skin in 1 pt (0.8%). Discontinuation of SCD was seen in 28 pts (22.8%) primarily for headache G3 (4 pts – 3.2%), hair loss G3 in 15 pts (12.2%), discomfort in 8 pts (6.6%), use of head cover in 1 pts (0.8%).

### Conclusions

This prospective observational study suggests that SCD is effective in preventing A in a relevant number of patients (86.2%) undergoing also anthracyclines followed by taxanes in sequential schedule.

Special thanks to our patients.

### References

- 1) Rugo HS, et al. Association between use of a scalp cooling device and alopecia after chemotherapy for breast cancer. JAMA, 2017; 317: 606-614
- 2) Rugo, H, et al. "Scalp cooling with adjuvant/neoadjuvant chemotherapy for breast cancer and the risk of scalp metastases: systematic review and meta-analysis. Breast Cancer Res Treat. 2017; 163(2):199-205.
- 3) Rugo HS et al. Scalp hypothermia for preventing alopecia during chemotherapy. A systematic review and meta-analysis of randomized controlled trials. Clinical Breast Cancer, 2017.

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