Clinical Report Summary of Scalp Cooling Efficacy
Published experiences with Paxman Scalp Cooling System (Paxman) from 1997 – 2013 Efficacy and Patient Acceptability Data.

Table of contents

Features ———— 1 - 2
UK Study ———— 3 - 4
Norwegian Study ——— 5 - 6
Netherlands Study ——— 7 - 10
Netherlands Study2 ——— 11 - 12
Netherlands Study3 ——— 13 - 14
Swiss Study ———— 15 - 18
Lebanese Study ——— 19 - 22
Testimonials ———— 23 - 24

References

Massey CS. A multicentre study to determine the efficacy and patient acceptability of the Paxman Scalp Cooler to prevent hair loss in patients receiving chemotherapy. Eur J Oncol Nursing; 8: 121-130, 2004
De Vries NF and Andersen OK. Scalp cooling as a method of avoiding alopecia in cancer patients receiving chemotherapy. Presented at ECCO 11 Lisbon 2011
C.J.G. van den Hurk, M.E. van den Akker-van Marle et al. Impact of scalp cooling on chemotherapy-induced alopecia, wig use and hair growth of patients with cancer
Betticher et al, Efficacy and tolerability of two scalp cooling systems for the prevention of alopecia associated with docetaxel treatment; Support Care Cancer (2013) 21:2565–2573
C.J.G. van den Hurk et al, Acta Oncologica, 2012;00: 1-8 Scalp cooling for hair preservation and associated characteristics in 1411 chemotherapy patients - Results of the Dutch Scalp Cooling Registry
Professor Fadi Nasr, personal communication, publication in preparation

For full details of studies please contact Paxman at:
info@paxman-coolers.com or +44 (0) 1484 349 444
The leading Global expert in scalp cooling

Features

- Proven success rates
- Mobile system = mobile patient
- Minimal nursing supervision required
- Simple to operate touch screen display
- Constant temperature maintained throughout treatment
- Caps do not require changing during treatment
- 5 cap sizes available to cater for various head shapes, moulds to shape and contour of head
- Lightweight, reusable silicone caps supplied with neoprene covers for effective insulation
- Available as single or double model, where each patient can be treated independently

Glossary of abbreviations

FEC: 5-fluorouracil, epirubicin and cyclophosphamide
FAC: 5-fluorouracil, adriamycin and cyclophosphamide
CMF: Cyclophosphamide, methotrexate and 5-fluorouracil
TAC: Docetaxel, Doxorubicin and cyclophosphamide
AC: Doxorubicin, Endoxan®
CIA: Chemotherapy-Induced Alopecia.
UK observational study reports an **89% success rate** following use of the Paxman System in breast cancer patients, with **only 11% with severe hair loss** requiring wigs.

### Methods

- 95 breast cancer patients being treated with chemotherapy in the adjuvant or palliative setting
- Open, non-randomised, observational study conducted at 8 UK sites between 1997 – 2000
- Chemotherapy regimens include:
  - Epirubicin (60 – 75 mg/m²) regimens as monotherapy (10 patients) or the FEC combination therapy regimen used 1997-2000 (62 patients)
  - Doxorubicin as monotherapy or combination administered to 11 patients (doses ranging from 30 - 60 mg/m²)
  - Docetaxel single agent (75 – 100 mg/m²) (n=5) CMF** (n=5)
- **Scalp cooling times:**
  - Pre-infusion cooling time of 15-20 minutes
  - Cooling was maintained during the infusion period
  - Post-infusion cooling time of 120 mins for majority of patients
- Hair loss graded according to criteria in table below

### Results

#### Alopecia prevention

- Of patients receiving chemotherapy (n=95), grade 3 hair loss was observed in 5 patients and grade 4 hair loss in one patient (only 11% of patients required wigs)
- 5 / 95 patients discontinued scalp cooling treatment
- Of patients receiving FEC specifically (n=62), grade 3 hair loss was observed in 2 patients and grade 4 hair loss in one patient (only 13% of patients required wigs)

#### Patient comfort, acceptability and side effects

Patients reported high comfort and acceptability levels with low numbers of withdrawals from scalp cooling

- 85% of patients reported they were comfortable, reasonably comfortable, or very comfortable during the scalp-cooling period
- 12% of patients reported they were uncomfortable with an additional 3% very uncomfortable
- Only 5% of patients discontinued scalp cooling before the end of chemotherapy treatment, with discontinuation because of discomfort seen in one patient
- Headaches at some time during treatment cycles were reported in 32% of patients

**Evaluation of Hair Loss**

**Hair Loss Grade**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No significant hair loss</td>
</tr>
<tr>
<td>1</td>
<td>Minor hair loss not requiring wig</td>
</tr>
<tr>
<td>2</td>
<td>Moderate hair loss but not requiring wig</td>
</tr>
<tr>
<td>3</td>
<td>Severe hair loss requiring a wig</td>
</tr>
<tr>
<td>4</td>
<td>Total alopecia</td>
</tr>
</tbody>
</table>

**Hair Loss Grade**

<table>
<thead>
<tr>
<th>% Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

**Patient age range** 28 – 61 years, mean age 44

Patients completed questionnaires related to comfort and acceptability of scalp cooling

Massey CS. A multicentre study to determine the efficacy and patient acceptability of the Paxman Scalp Cooler to prevent hair loss in patients receiving chemotherapy. Eur J Oncol Nursing; 8: 121-130, 2004
Norwegian observational study reports a 92% success rate following use of the Paxman System in 54 breast cancer patients treated with FEC/FAC or paclitaxel.

Results

Hair loss

<table>
<thead>
<tr>
<th>Evaluation of Hair Loss - All Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Patients</td>
</tr>
<tr>
<td>No Hair Loss</td>
</tr>
<tr>
<td>Minor Hair Loss</td>
</tr>
<tr>
<td>Moderate Hair Loss</td>
</tr>
<tr>
<td>Significant Hair Loss</td>
</tr>
</tbody>
</table>

Authors concluded that scalp cooling is an effective method for avoiding alopecia in patients receiving FEC or weekly paclitaxel.

Patient comfort, acceptability and side effects

89% of patients described scalp cooling as acceptable, with minimal discomfort caused by the longer treatment period.

- Only 15% of patients considered coldness to be a major problem
- Only 2% of patients considered headaches to be a major problem
- One patient discontinued treatment because of discomfort

Methods

- 54 breast cancer patients being treated with chemotherapy in the neo-adjuvant, adjuvant or palliative settings in single Norwegian centre between 2000 - 2001

Chemotherapy regimens:

- FEC*/FAC - epirubicin (60 mg/m2)
- Weekly paclitaxel (P) (90 mg/m2)

Scalp cooling times:

Pre-infusion cooling time

- FEC/FAC: median 20 mins (range 15-150 mins)
- P: median 20 mins (range 15 - 120 mins)
- Cooling was maintained during the infusion period

Post-infusion cooling time

- FEC/FAC: median 120 mins (range 120 - 150 mins)
- P: median 60 mins (range 60 - 120 mins)

Patient age range 28 - 61 years, mean age 44

- Patients views related to comfort and acceptability of scalp cooling were collated by contact nurse

*FEC - 5-fluorouracil, epirubicin and cyclophosphamide
*FAC - 5-fluorouracil, adriamycin and cyclophosphamide
**CMF - Cyclophosphamide, methotrexate, 5-fluorouracil
P - Paclitaxel

De Vries NF and Andersen OK. Scalp cooling as a method of avoiding alopecia in cancer patients receiving chemotherapy. Presented at ECCO 11 Lisbon 2011
Observational study reports a 40% reduction of head covers when using the Paxman system in breast cancer patients

- A head cover was still used by 51% of the scalp-cooled patients, so improvement in effectiveness is desirable
- 38% of scalp-cooled patients were thought to have purchased a wig needlessly
- Another study conducted by Auvinen et al., 2010 showed unnecessary purchases totalled to 80%
- Arrangements are made by patients' hairdressers to consult and reserve a wig before chemotherapy
- This arrangement should not be restricted to scalp-cooled patients, as the incidence of CIA without scalp cooling is sometimes overestimated
- Study carried out by Mols et al., 2009 in breast cancer patients (n=175) were satisfied with their wig, however two thirds of them felt it was expensive which, again is a reason for postponing the purchase
- The high frequency of wigs and head covers purchased to camouflage potential hair loss illustrates the importance of CIA for patients undergoing systemic therapy
- While some patients lose almost all of their hair but do not wear head covering and vice versa, it has come to our attention that head cover use still best reflects the patients' satisfaction with scalp cooling

### Wig and Head Cover (n=246)

<table>
<thead>
<tr>
<th>Type</th>
<th>Scalp-cooled (n=160)</th>
<th>Non-scalp-cooled (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purchase/use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchased wig</td>
<td>84 (53)</td>
<td>46 (77)</td>
</tr>
<tr>
<td>Used wig</td>
<td>52 (33)</td>
<td>59 (69)</td>
</tr>
<tr>
<td>Purchased head cover</td>
<td>117 (73)</td>
<td>83 (97)</td>
</tr>
<tr>
<td>Used head cover</td>
<td>81 (51)</td>
<td>78 (91)</td>
</tr>
<tr>
<td><strong>Growth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>During chemotherapy</td>
<td>31 (24)</td>
<td>5 (7)</td>
</tr>
<tr>
<td>Within 3 weeks</td>
<td>19 (19)</td>
<td>10 (16)</td>
</tr>
<tr>
<td>3-6 weeks after</td>
<td>45 (46)</td>
<td>27 (43)</td>
</tr>
<tr>
<td>6-8 weeks after</td>
<td>18 (18)</td>
<td>18 (28)</td>
</tr>
<tr>
<td>8 weeks after</td>
<td>17 (17)</td>
<td>8 (13)</td>
</tr>
<tr>
<td>Missing</td>
<td>30</td>
<td>18</td>
</tr>
<tr>
<td><strong>Satisfied with current hair style</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 weeks after</td>
<td>111 (65)</td>
<td>57 (78)</td>
</tr>
<tr>
<td>6 months after</td>
<td>111 (94)</td>
<td>50 (86)</td>
</tr>
</tbody>
</table>
Patients completed questionnaires related to comfort and acceptability of scalp cooling. Observational study was scored using the WHO & VAS system.

<table>
<thead>
<tr>
<th>Hair Loss Grade</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 0</td>
<td>None</td>
</tr>
<tr>
<td>Grade 1</td>
<td>Mild</td>
</tr>
<tr>
<td>Grade 2</td>
<td>Pronounced</td>
</tr>
<tr>
<td>Grade 3</td>
<td>Total</td>
</tr>
</tbody>
</table>

Long duration of CIA, the wish of patients to camouflage or rather prevent it and the reduced need for head covering in 40% of the patients, makes scalp cooling a worthwhile supportive intervention.

Scalp-cooling times and temperatures can be improved by temperatures and adapting indications (e.g. type of chemotherapy and patient motivation), but also by adapting patient information about CIA and scalp cooling. Patients should be advised not to buy a wig as a precaution, but to wait until it becomes necessary.
Randomised study in the Netherlands shows that a reduction in scalp cooling time to 45 minutes, did not reduce the effectiveness of the PSCS in preventing hair loss in docetaxel treated cancer patients.

Results

Head cover or wig prevention

No head cover or wig required in 88% of patients following 45 mins post-infusion cooling after 3-weekly docetaxel, compared with 74% after 90 mins post-infusion cooling.

Tolerance

Headaches were only reported in 20% of patients, with only 5% of patients discontinuing scalp cooling.

- Visual analogue scale (VAS): mean score = 69 (0 = bad, 100 = good)
- Headache: 80% no headaches; 13% mild headache and 7% moderate / severe headache
- 5% of patients discontinued scalp cooling because of intolerance

Methods

- Trial involving 166 cancer patients from 11 hospitals in the Netherlands, carried out in 2 phases, to determine the effectiveness and tolerance of scalp cooling

Chemotherapy regimens:

- 3-weekly docetaxel (75 mg/m2 or 100 mg/m2)

Scalp cooling times:

- Pre-infusion cooling time 30 mins
- Cooling was maintained during the infusion period
- Post-infusion cooling time: Phase I: 90 mins; Phase II: 90 mins vs 45 mins
- Phase I = non-randomised; phase II randomised
- Effectiveness based on whether patient required head cover or wig

Patients:

- Age range 35-79 years, mean age 44
- Docetaxel 75 mg/m2 (39%); 100 mg/m2 (61%); 36% male
- Breast cancer (49%), prostate cancer (33%), lung carcinoma (23%)
- Patients views related to comfort and acceptability of scalp cooling were collated by contact nurse
- Tolerance of scalp cooling determined

Observational study of scalp cooling in the Netherlands reports a mean success rate of 48% in 1411 patients treated with chemotherapy for a range of different cancer types.

- Scalp cooling has been widely used in routine clinical practice in the Netherlands and most hospitals participate in registration of results.
- Results for 13 different chemotherapy regimens with more than 10 patients up to 2013 are reported.
- The method of scalp cooling is not specified.

### Results

- Success rates (no wig or head cover required) varied according to regimen.
- Mean success rate of 48% (range 8 – 80%)*

### Summary

**Overall Summary of effectiveness and tolerance of the Paxman Scalp Cooling System**

- Three independent observational studies have demonstrated the effectiveness of the Paxman Scalp Cooling System in the prevention of chemotherapy induced hair loss with widely used chemotherapy dosages and regimens.
- High levels of comfort and patient acceptability were reported in all trials, with low numbers of patients discontinuing scalp cooling, even when post-infusion cooling extended for 2.5 hours.

---

*Please Note*

The Dutch study was carried out more recently than the UK and Norwegian studies and since in general higher doses of chemotherapy may have been used in recent years this may explain the difference in results.
Results

Kaplan-Meier estimate to reach the combined endpoint (alopecia WHO III/IV and/or wearing a wig) showing Paxman cooling systems and CC have a significantly reduced risk of alopecia by 78%

Tolerability

- Was reported by 3.3% of patients for Paxman cooling systems and CC combined
- Patients questionnaire showed low incidences of freezing and unpleasant feelings

Risk of alopecia is significantly reduced (70%) when using either the Paxman cooling systems or CC compared to no cooling

In particular alopecia is reduced by these two cooling devices when docetaxel is administered every 3 weeks

Since with no protection the majority of patients receiving docetaxel (every 3 weeks) will temporarily lose all their hair, and the study confirms that scalp cooling is an effective measure to prevent alopecia in these patients

Patient assessment and overall patient rating

On a six-point scale (1=good to 6=bad), with respect to global impression of therapy, end of study patients on rated

- PAX 4.5±1.6; on
- CC: 4.6±1.4; and on
- No cooling, 4.1±1.9.

The respective grading marks (same scale) in the three groups were very similar

Incidence of combined endpoint (alopecia WHO III/IV and/or wearing wig) by docetaxel treatment schedule

- Risk of alopecia is significantly reduced (70%) when using either the Paxman cooling systems or CC compared to no cooling
- In particular alopecia is reduced by these two cooling devices when docetaxel is administered every 3 weeks
- Since with no protection the majority of patients receiving docetaxel (every 3 weeks) will temporarily lose all their hair, and the study confirms that scalp cooling is an effective measure to prevent alopecia in these patients

Non-randomized prospective controlled study between July 2009 and October 2011, in patients at 27 sites in Switzerland (sited below)
238 Patients participated in this study (all with several types of cancer; Breast, Lung, Prostate and others)

- 128 PAX (Paxman cooling machines, PSC-2)
- 71 CC (cold caps)
- 39 no cooling

Patients could choose depending on local availability of alopecia prevention from the following options:

**Alopecia prevention using the Paxman cooling machines (PAX) model PSC-2**
- Pre-infusion cooling 15mins
- Cooling was maintained during the infusion period
- Post infusion cooling 90mins (45min according to amended temperature)

**Alopecia prevention Cold Cap (manufacturer not specified)**
- Pre-infusion cooling 15mins
- Cooling was maintained during the infusion period
- Post infusion cooling 90mins (45min according to amended temperature)
- Cold Caps have to be exchanged after the first 25mins treatment, after another 45mins, and every 60mins thereafter (the cooling temperature was not prespecified for CC)

**No Alopecia prevention (no cooling group)**
- Patients refusing cooling treatment did not receive any alopecia prophylaxis but were also documented provided they gave consent

**Chemotherapeutic regimen**
All patients except for 1 received docetaxel chemotherapy, alone or in combination with other agents.

**Patient gender and age range was:**

<table>
<thead>
<tr>
<th>Gender</th>
<th>PAX (N=128)</th>
<th>CC (N=71)</th>
<th>No cooling (N=39)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>67</td>
<td>64</td>
<td>67</td>
</tr>
<tr>
<td>Female</td>
<td>77</td>
<td>33</td>
<td>23</td>
</tr>
</tbody>
</table>

Total number of patients who participated in this trial is 238 from 27 different sites. The table above shows the patients.

**WHO scoring system used to determine hair loss by this observational study**

<table>
<thead>
<tr>
<th>Hair Loss Grade</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 0</td>
<td>None</td>
</tr>
<tr>
<td>Grade 1</td>
<td>Mild</td>
</tr>
<tr>
<td>Grade 2</td>
<td>Pronounced</td>
</tr>
<tr>
<td>Grade 3</td>
<td>Total</td>
</tr>
</tbody>
</table>

Betticher et al, Efficacy and tolerability of two scalp cooling systems for the prevention of alopecia associated with docetaxel treatment; Support Care Cancer (2013) 21:2565-2573
Success of using the Paxman cooling system on Lebanese patients was overwhelming. The results show a great response to the head cooling medical system.

Success Stories

Overall scalp cooling had excellent results in 91.21% patients (as data above shows)

This was the result of a similar trend shown across the majority of hospitals in Lebanon

The graph illustrates Mount Lebanon with the highest success rate of 55 (93%) patients showing a great response. Mount Lebanon hospital also had 6 patients receiving the multi-combinational therapy known as TAC which produces a high incidence of CIA. However all 6 patients had a great response to the Paxman cooling system showing no signs of hair loss.

• 91 cancer patient were used for this study with a success of 91%  
• 6 of these patients were undergoing treatment with TAC, with all 6 showing no signs of hair loss  
• The severity of CIA has been reduced greatly by using the Paxman cooling system with only 5 patients out of 91 not responding well to head cooling
Clinical Report Summary of Scalp Cooling Efficacy

Methods

- 91 cancer patients were used in this study
- Open non-randomised observational study conducted in several Lebanon sites between March 2012 – April 2013

This study was carried out by Professor Fadi Nasr, consisting of more than 620 sessions, on various regimens and dosages (shown left).

Professor Fadi Nasr’s study demonstrates the effectiveness of the Paxman scalp cooling system on a variety of anti-cancer treatments. It should be noted that the difference in climate, nature of skin and types of hair amongst European and Mediterranean, makes a difference with pre/post infusion times.

Scalp cooling times

- Study was carried out using both the European and US protocols
- Post infusion times with exact dosages were given to patients
- Pre-infusion cooling time of 90mins
- Cooling was maintained during the infusion period
- Post-infusion cooling time was dependent upon drug dosage (120-360mins)

Drugs Regimen

<table>
<thead>
<tr>
<th>Drug Regimen</th>
<th>Average number of sessions</th>
<th>Average post infusion cooling times (Hr)</th>
<th>Minimum Recommended Post Infusion Cooling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Docetaxel 80-130mg as monotherapy or combination</td>
<td>4</td>
<td>2h45</td>
<td>Excellent results</td>
</tr>
<tr>
<td>TAC (Docetaxel 100mg, Doxorubicin 70mg, Cyclophosphamide 1gr) administered to 6 patients</td>
<td>4</td>
<td>4h45-5h15</td>
<td>Excellent results, 31 year old patient</td>
</tr>
<tr>
<td>AC (Doxorubicin 100mg/ Endoxan 1000mg)</td>
<td>2-4</td>
<td>2h15-4h15</td>
<td>1 patient moved hospital after 2 cycles and lost hair as cooling to the scalp was not offered</td>
</tr>
<tr>
<td>Taxotere 100mg + Herceptin</td>
<td>1-6</td>
<td>2h45</td>
<td>Excellent results</td>
</tr>
<tr>
<td>Taxol 120-140mg</td>
<td>4-15</td>
<td>2h45</td>
<td>1 patient did not continue after 2nd cycle, medium hair loss was observed</td>
</tr>
<tr>
<td>Taxol 120mg/ Carboplatin</td>
<td>6</td>
<td>2h45</td>
<td>Excellent results</td>
</tr>
<tr>
<td>FEC (5 Fluorouracil 850-900mg, Epirubicin 130-160mg, Cyclophosphamide 850-900mg)</td>
<td>2-3</td>
<td>4h15-5h15</td>
<td>Excellent results, hair loss was observed at really high doses, excellent results at lower dose regimens</td>
</tr>
<tr>
<td>Alimta 700mg + Carboplatin 300mg</td>
<td>6</td>
<td>2h45</td>
<td>Excellent results</td>
</tr>
<tr>
<td>FAC (5 Fluorouracil 750mg, Doxorubicin 60-70mg, Cyclophosphamide 750mg/ 1gr)</td>
<td>3-4</td>
<td>3h-4h10</td>
<td>Excellent results</td>
</tr>
<tr>
<td>TCH (Docetaxel 100mg/ Carboplatin 450mg/ Herceptin 650mg)</td>
<td>4-8</td>
<td>2h30-3h45</td>
<td>Excellent results</td>
</tr>
<tr>
<td>VP 16 Eltoposide</td>
<td>15</td>
<td>2h30-3</td>
<td>5 cycles of 3 sessions, no hair loss, excellent results</td>
</tr>
<tr>
<td>Taxol/ Cisplatin, Herceptin (TCH)</td>
<td>4</td>
<td>2h45</td>
<td>Excellent results</td>
</tr>
<tr>
<td>(T 100mg, CI 150mg, H 440mg)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTK 100mg – Doxorubicin 80mg</td>
<td>3</td>
<td>3h</td>
<td>Excellent results</td>
</tr>
<tr>
<td>AD (Doxorubicin 50mg, Dacarbazine 550mg)</td>
<td>6</td>
<td>2h30</td>
<td>Excellent results</td>
</tr>
<tr>
<td>Gemzar 1600mg + Carboplatin</td>
<td>1-6</td>
<td>2h45</td>
<td>Excellent results</td>
</tr>
</tbody>
</table>

Excellent results

Professor Fadi Nasr’s personal communication, publication in preparation.
I was diagnosed in July 2012 and was extremely reluctant to have chemotherapy treatment; largely because I had long hair and dreaded losing it. The oncologist was definitely in favour of a course of 4 rounds of adjuvant chemotherapy. When I shared my hair concerns he told me that they had the Paxman system, and the knowledge that I might not have to lose my hair was a big factor in me accepting the treatment. Only the first 10 minutes or so were mildly uncomfortable, but I didn’t have any headaches or other side effects from the cooling.

I had cut my hair shorter before I started, and was very careful when washing or combing it. Of course I did shed quite a bit, but interestingly feel that much of that was stress related. I felt the results of using the Paxman system were very impressive, I lost other body hair and I’m convinced that without this system I would have had no chance of keeping my appearance almost unchanged. Thank you again for this system, it made an immense difference to my life at a most difficult time.

Fiona Cole, Singapore

As scalp cooling has been proven to have good efficacy in many chemotherapy treated patients it should be offered more widely. Patients should have the option to choose scalp cooling in the adjuvant setting (except in many haematological situations). It would not be meaningful to try to examine the risks of scalp cooling by long term studies comparing survival in scalp cooled and non-scalp cooled patients – because results will not be available for 10-15 years, the consequences will be minimal since methods of scalp cooling and chemotherapy regimens will have changed during this period.

Dr Wim Breed, Medical Oncologist, President of Dutch Foundation Geef Haar een Kans (Give hair/her a chance)

It is so important for cancer patients to be aware of scalp cooling and moreover for each eligible patient to be given the choice by medical professionals throughout the world to access this treatment. Continued registration of results, research and knowledge-sharing is required to further increase the number of patients benefiting from scalp cooling.

Dr Corina van den Hurk

Chemotherapy induced hair loss is a very distressing experience for many women undergoing breast cancer chemotherapy and this can have a significant impact on quality of life and self esteem. Scalp cooling during chemotherapy offers the potential for reducing or preventing hair loss, by restricting blood flow and reducing the concentration of cytotoxic drugs reaching hair follicles during the infusion period. Where breast cancer patients have concerns around chemotherapy induced hair loss, scalp cooling is a very worthwhile option that should be discussed with them.

Professor Ian Smith, Professor of Cancer Medicine, Royal Marsden Hospital, Institute of Cancer Research, London.

Some of your hair will fall out. You have to be prepared for it. My key piece of advice is that you have to believe in the treatment. If you think it won’t work, chances are it won’t. But I really believed in the cooler - I wanted it to work with a passion, and it did. Some people just can’t cope with the cold as well as the chemo infusion but it is worth serious consideration before you start your treatment.

The cooler was so successful, my hairdresser said my hair has never been in such good condition. I am eternally grateful for the Paxman cooler, which made my cancer journey just a little bit more bearable. I am passionate that all cancer patients should have information to make choices about hair loss, and that my experience should benefit others.

Michelle Wardley, United Kingdom

For me hair loss is the only sign of being a breast cancer patient. As I’d had my cancer lump removed with breast conserving surgery, my chemo was purely preventative and I was no longer a cancer sufferer.

At the start of my treatment plan, I didn’t want the chemo – no one does – but if I was going to have it, it would be on my terms – you have limited choices about your surgery, chemo, radiotherapy etc but you can try to control the visible signs. I didn’t want to lose my hair and show the world I had had cancer. Seeing a friend or family member with no hair would be shocking to me. I didn’t want them (and me) to see me like that.

Some of your hair will fall out. You have to be prepared for it. It’s my key piece of advice is that you have to believe in the treatment. If you think it won’t work, chances are it won’t. But I really believed in the cooler – I wanted it to work with a passion, and it did. Some people just can’t cope with the cold as well as the chemo infusion but it is worth serious consideration before you start your treatment.

The cooler was so successful my hairdresser said my hair has never been of such good condition. I am eternally grateful for the Paxman cooler which made my cancer journey just a little bit more bearable. I am passionate that all cancer patients should have information to make choices about hair loss, and that my experience should benefit others.

Michelle Wardley, United Kingdom

My take on the Paxman Cooling System is two-fold: on the one hand patients come to chemo with a different attitude and with a lighter feel and less of the heavy sombreness, and on the other hand, after so many years of having to deal with alopecia and its multiple effects on patients it has become such a relief and pleasure seeing them at the end of chemo looking so intact in all aspects not just the hair!

Sunil Daryanani, Medical Oncologist, Hospital de Clinicas Caracas and Centro de Diagnosticos Docente Las Mercedes, Venezuela

Testimonials