Cold Capping for Chemotherapy Patients

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Cancer is a terrible disease that has personally impacted close members of the author’s family over recent times. Cancer affects millions every year, both physically and mentally, for as well as coping with the disease, patients have the added trauma of dealing with hair loss due to chemotherapy treatment. To reduce hair loss, mechanical cold capping systems are used which narrow the blood vessels, reducing the amount of chemotherapy chemicals reaching the scalp. Existing cold capping systems incorporate a cooling machine pushing cold liquid through a cap worn by a patient before, during and after each chemotherapy treatment. The cold caps are functional rather than aesthetic and require the patient to spend up to an additional 3 hours in the hospital seat during the postinfusion stage to optimise exposure time to the cytostatic agents. Through a consumer driven process evaluating different design ideas, the author has developed an innovative cold cap, providing a competitive advantage over existing designs. This new cold cap is a stylish yet portable cold cap using a peltier device, providing autonomy for the patient to travel home after treatment, without the extra 3-hour wait. With the addition of different styled cap covers, the user can hide the whole cap, expressing themselves through the different designs and simultaneously eliminating the user feeling medicalized by the cap. Extensive research and experimentation of compatible and affordable materials and methods was carried out to ensure the new cold cap could be used by all individuals from all socio-economic backgrounds.

Awards Won: