Summary and Conclusions

Vitiligo is an acquired pigmentary disorder characterized by the loss of skin color and functional melanocytes. Vitiligo is a “complex disorder, termed polygenic and multifactorial, reflecting simultaneous contributions of multiple genetic risk factors and environmental triggers.

There is no cure for vitiligo but several treatment options are available. Replenishing the skin with new melanocytes is needed during the repigmentation process and is dependent on existence of stem cells. Narrow band UVB exposure induces MelSCs differentiation that found in the bulge of hair follicle into melanoblasts. Also following UVB irradiation, stem cells in the ORS of the hair follicle are reprogrammed towards melanocyte lineage.

This study investigated the existence of CK15 and CK19 as markers for MelSCs proliferation in 50 vitiligo patients during NB-UVB phototherapy in comparison with 40 normal participants. Also it investigated the relation between skin expression of CKs and several vitiligo-related factors like age, duration of vitiligo, course of vitiligo, hair greying and the improvement.

Cytokeratins 15 &19 were measured in skin biopsies. Biopsies were taken from protected areas, depigmented area at the centre of the lesion near the perifollicular pigmentation at 4\textsuperscript{th} and 6\textsuperscript{th} month after treatment. The studied cytokeratins were measured by qRt- PCR.

Cytokeratins 15 and 19 skin expression were found to be significantly higher among the studied patients than the control group. Also, they were found to be significantly higher at 6\textsuperscript{th} month than 4\textsuperscript{th} month after treatment among the patients.
There was a significant negative correlation between age and CK-15& 19 expression. It was found that CK15 and CK19 are higher in young patients whose ages less than 40 years old than patients older than 40 years.

In this study, cytokeratins were found significantly higher in patients with shorter duration of the disease (less than 10 years) than patients with longer duration.

As the relation between CKs expression and activity of the disease among the patients were studied. It was found that CKs level tend to be higher as the disease became stable.

Cytokeratins15&19 expression levels were significantly highest in very much improved patients and lowest in minimally improved patients at 4th and 6th month measurement after NB-UVB therapy as assessed by VASI and VETI scores.

It was found that the studied cytokeratins had a significant relation with the color of hairs in vitiligenous lesions. Patients who still had pigmented hairs in vitiligenous areas had a significantly higher cytokeratins level at 4th month after treatment and their cytokeratins increased more at 6th month under UVB therapy than patients whose hairs lost the pigment.