The BJD is embracing core outcome set development – why this is good news

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Linked Article: Horbach et al. Br J Dermatol 2018; 178:473–481.

The BJD now has a dedicated section for qualitative and outcomes research, and has been a long-standing supporter of groups developing core outcome sets in dermatology. As such, it is no surprise to find the article by Horbach et al. in this issue’s BJD, which outlines the first important steps on the journey towards a fully defined core outcome set for vascular malformations (OVAMA project).

This body of work has much to recommend it. The team has worked with some of the leading groups in the world to develop their methodology, including the Core Outcome Measures in Effectiveness Trials Initiative (COMET; http://www.comet-initiative.org/) and the Cochrane Skin Group – Core Outcome Set Initiative (CSG-COUSIN; http://www.uniklinikum-dresden.de/COUSIN), which provides guidance and methodological support for groups wishing to develop core outcome sets in dermatology.3,4 The team has used the COS-STAR reporting guidelines to ensure transparency and completeness of reporting,5 and has worked hard to ensure international engagement; with input from varied stakeholder groups including dermatology, radiology and plastic surgery, as well as patients.

It is useful to reflect on some of the guiding principles when considering the development of a core outcome set for individual conditions.

Why is international involvement so important?

The aim of a core outcome set is to harmonize outcomes for use in trials throughout the world so that results from different studies can be combined in meta-analyses, and patient care improved through better understanding of the available evidence. To achieve this, it is vital that all interested parties work together to agree a unified set of outcomes for all future trials.

Should core sets be developed for different (but similar) conditions?

Let’s not kid ourselves; developing a core outcome set is a LOT of work. Are there efficiencies to be made in developing core outcome sets that address a variety of similar conditions? The OVAMA group has explored such potential efficiencies by looking at core domains for three different types of vascular malformations within a single core outcome project: lymphatic, venous and arteriovenous malformations. Having separate voting for each condition was a brave move, which could have resulted in different core domains for each. Happily, this was not the case, and the group has been able to identify eight core domains that are relevant across all three conditions (although the specific instruments used to measure these domains may differ by condition).

Why is it important to follow quality standards?

Developing a core outcome initiative is a big responsibility that should not be underestimated. The decisions being made today could well influence trial design and conduct for the next decade or more, and so it is incumbent on those developing core outcome sets to follow the best possible methods to achieve consensus. By working with groups such as CSG-COUSIN in the field of dermatology, groups can be supported to make informed decisions about best practice in developing international consensus agreements.

So watch this space – you’ll be hearing much more about dermatology core outcome sets in the coming years. This is great news for everyone, but especially for patients and healthcare professionals wanting to make treatment choices based on the best available evidence.

Conflicts of interest

K.S.T. is a member of the Executive Group for the Harmonizing Outcome Measures for Eczema (HOME) initiative, and a member of the methodological advisory group for CSG-COUSIN.

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A fascinating and unexpected link between ultraviolet (UV)B and adipose tissue has been proposed by the pioneering original article of Kim et al., published in the current issue of the BJD. It is well established that adipose tissue is not a mere inert fat-storage facility, but is an endocrine organ secreting multiple mediators, named ‘adipokines’; furthermore, these adipokines are able to contribute to systemic inflammation. These mediators released either by adipocytes or by other cells resident in the adipose tissue are able to contribute to systemic inflammation. These mediators are represented by conventional adipokines, such as adiponectin, leptin, visfatin and chemerin. Moreover, there is also a wide array of adipocytokines and adipochemokines secreted not all exclusively by adipocytes. Indeed, adipose tissue also contains endothelial cells, fibroblasts, macrophages, myeloid cells and T cells, which contribute to their production. Adipokines are able to orchestrate the interaction between metabolic and immune systems. The mediators released either by adipocytes or by other cells resident in the adipose tissue may have a significant role in several autoimmune skin diseases, acting on immune cells and keratinocytes. Subcutaneous (SC) and visceral fat are different in composition, metabolism and functions. Some studies have shown that a decrease in SC fat as well as an increase in visceral fat resulted in a diminished risk for metabolic syndrome. These events are interrelated because the age-related impairment of the lipid storage capability of SC fat promotes excess visceral fat, leading to an altered metabolic homeostasis. As UVB cannot cross the dermis, SC fat had been considered to be relatively unaffected by UVB exposure. However, the recent concept of bidirectional cross-talk between skin and adipose tissue highlights the possibility of a dynamic interplay. The authors have previously reported that UVB-irradiated skin modulated SC fat metabolism via the release of pro-inflammatory factors. However, how these factors could influence SC fat activity still remained unclear. In their current paper, Kim et al. have shown for the first time that adipocytes treated with UVB-irradiated keratinocytes and fibroblasts produce specific adipochemokines, including C–X–C chemokines such as ENA-78, and C–C chemokines such as MIP-3α and RANTES, which impair triglyceride synthesis via downregulation of lipogenic enzymes. Moreover, they have confirmed the results in vivo comparing sun-exposed skin with sun-protected skin, exploring also the ability of UVB irradiation to induce macrophage infiltration into adipose tissue. Overall, the data from the article by Kim et al. suggest that the bridge between UVB irradiation and SC fat is represented by the skin with a crucial role played by fibroblasts and keratinocytes. This manuscript has demonstrated that UVB exerts pro-inflammatory effects on SC adipose tissue. These results may help to explain why phototherapy does not reduce the risk of cardiovascular events in patients with psoriasis, in contrast to benefits described for systemic therapies.

Additional studies are needed to investigate UVB effects on visceral fat tissue, as the latter is mainly associated with a higher risk of cardiovascular events.

**Conflicts of interest**
None to declare.

**Linked Article:** Kim et al. Br J Dermatol 2018; 178:492–501.

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