COST is supported by the EU Framework Programme Horizon 2020

Resources

StanDerm

Working Groups

Working Group 3 / Subgroup UV-induced skin cancer

EUROPEAN INTERVENTION STUDIES
StanDerm WG 3 and WG 3 Subgroup on UV-induced Skin Cancer: Achievements
List of Tools for Intervention Studies

Initiated by Richard Brans

• for occupational skin diseases (including hand eczema scores, scores to assess QoL).

• intended to help choosing the right instrument when designing a new study.
## List of Tools for Intervention Studies: COST Action TD1206 StanDerm WG3

### Scores for assessment of prevalence and severity of hand eczema (review [1])

<table>
<thead>
<tr>
<th></th>
<th>User</th>
<th>Languages</th>
<th>Valid</th>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Literature</th>
</tr>
</thead>
</table>
| Osnabrumec Hand Eczema Severity Index (OHESI) |      | German, English        | x     | • easy to use and fast  
• validated also in non-dermatologists  
• no subjective assessment of intensity  
• high reproducibility  
• no consideration of subjective symptoms  
• validated for inter- and intra-observer reliability | • possibly less useful in early dermatitis  
• only extent problematic to assess changes if affected area remains the same | Dev.+Valid.  
[2-4]  
Studies:  
[5-8] |
| Hand Eczema Severity Index (HECSI)          |      | Danish, English        | x     | • both extent and intensity  
• no consideration of subjective symptoms  
• validated for inter- and intra-observer reliability | • measuring intensity adds a subjective element affecting reproducibility | Dev.+Valid.  
[4, 9]  
Studies:  
[10-14] |
| Photographic guide                         | x    | English                | x     | • self-assessment possible [15]  
• potentially not good enough for all types of HE  
• not validated for inter- and intra-observer reliability | | Dev.+Valid.  
[15, 16]  
Studies:  
[11, 17, 18] |
| Occupational contact dermatitis disease severity index (ODDI) |      | English, German        | x     | • comprises clinical course (including reported history) and information  
• includes subjective factors | | Dev.+Valid.  
[19, 20]  
Studies: |
Is the list of tools for intervention studies useful to better achieve the expected outcome of intervention studies?

• **Feedback:** All Standerm members voted “YES”!
  – good to have an instrument in order not to reinvent the wheel
  – great guidance for project design
  – it is also important to use validated methods for joint projects and studies as it can bring uniformity in studies and help share data
  – used for standardization.
WG 3: *Intervention studies*

Evidence for **feasible and (cost-)effective diagnostics, treatment and prevention measures** in OSD as a basis for decisions on national prevention strategies and legislation.
National epidemiologic studies on prevalence and risk factors for OSC in:

- Italy
- DK
- UK
- Romania
• Initiated by Prof. Swen John and Marc Wittlich

• Some group members have engaged into the German pilot study “GENESIS-UV”, which aims at obtaining comparable UV exposure data with cutting edge technology on occupational activities through standardized long-term UV radiation measurements (6 months) in different countries.

• Germany → Italy, Netherlands, Denmark, Romania, Czech Republic, Spain
**GENESIS-UV: The German results of UV measurements**

- The project was initiated in 2014 by the German Social Accident Insurance (DGUV) to obtain reliable data on long-term UV exposure of outdoor workers.
- Daily measurements through a period of two years (6 months per year) have been carried out with 600 test persons from 97 occupations.
- Measurements revealed that a differentiation needs to be done between occupational activity and occupation as such to interpret the data.
  - **435 SED** (yearly) were measured for masons/bricklayers in general
  - **80 SED** (yearly) were measured for masons doing the inner wall construction
  - **581 SED** (yearly) were measured for a sewer construction worker
- These findings are extremely helpful to develop more targeted prevention measures in the future.
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Special Issue: Non-melanoma Skin Cancer by Solar UV. The Neglected Occupational Threat

April 2016

Volume 30, Issue Supplement S3
Pages 1–51
• The **WG 3 subgroup** on UV-induced occupational skin cancer (OSC) published an article on the **status quo in legal recognition and patient care services of occupational skin cancer** throughout Europe in an extensive open access JEADV supplement devoted to this topic in April 2016.

**The European Status Quo in legal recognition and patient-care services of occupational skin cancer**


1 Department of Dermatology, Skin Cancer Centre, Charité Universitätsmedizin Berlin, Berlin, Germany
2 Dermato-oncology Research Unit, Coimbra Clinical Hospital, and Dermato-oncology Research Unit, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania
3 Department of Dermatology, Bispebjerg Hospital, University of Copenhagen, Copenhagen, Denmark
4 Department of Dermatology, University Hospital Carl Gustav Carus, Technical University Dresden, Dresden, Germany
5 Institute for Interdisciplinary Dermatological Prevention and Rehabilitation (IDem), University of Denerbruck, Denerbruck, Germany
6 Department of Dermatology, Cochin Broca Hotel-Dieu Hospital, Paris, France
7 Faculty Hospital, Department of Dermatology, Charles University Prague, Prague, Czech Republic
8 Department of Occupational Medicine, University of Modena and Reggio Emilia, Modena, Italy
9 Hospital and Faculty of Medicine, Department of Dermatology, University of Coimbra, Coimbra, Italy
10 Department of Dermatology, Hospital M. Kopernika, Gdansk, Poland
11 Manchester Royal Infirmary (MRI), Central Manchester University Hospitals, Manchester, UK
The subgroup is presently finalizing a Delphi process to reach consensus on the acknowledgment, prevention, diagnosis and treatment of OSC in Europe. The outcome of consultations should be a roadmap for the management of OSC patients.
Prevention of Occupational Hand Eczema among Danish Hairdressing Apprentices

- **Denmark**: Sanne S Steengaard, Anne Bregnhøj, Jeanne Duus Johansen
- **Aim**: to investigate whether evidence-based intervention could increase the use of personal protective measures and reduce the prevalence of occupational hand eczema in hairdressing apprentices during training and after end education.
- **Study Population**: Hairdressing apprentices enrolled in the education summer 2008 and winter 2009. All 10 hairdressing schools in Denmark were involved. 4 schools was selected as interventions schools and 6 where control schools.
- **Time frame**: August 2008 – May 2015
Prevention of occupational hand eczema among German metal work apprentices

- **Germany**: Richard Brans, Anna Claßen, Annika Wilke, Michael Schön, Swen Malte John
- **Aim**: to investigate whether evidence-based intervention based on health education could increase the use of personal protective measures and reduce the prevalence of occupational hand eczema in a cohort of German metal work apprentices during training. Moreover, it will be evaluated if individual factors increase the risk of developing hand eczema and if these factors can be overcome by health education.
- **Study Population**: Metal work apprentices enrolled in the study in autumn 2013 and autumn 2014. One school in Osnabrück was selected as intervention school (n=132 apprentices) and 6 schools in Göttingen and the surrounding area as control schools (n=170 apprentices).
The Risk from occupational vs non-occupational sun exposure in Italy - Multi center SIDAPA study

• **Italy**: Rosella Gallo, Fabrizio Guarneri

• **Aim**: To evaluate the risk for NMSC associated with occupational vs recreational sun exposure and the risk perception on the part of patients/workers. To sensitize and inform patients/workers about the risks of sun/UV exposure and preventive measures.

• **Study Population**: 2700 adult patients undergoing treatment for NMSC (surgery, PTD, other...) in dermatology clinics affiliated to the Società Italiana di Dermatologia Alergologica, Professionale e Ambientale (SIDAPA) and 5400 controls matched by sex and age (+/- 5 years).
A cluster randomised controlled trial of a behavioural change package to prevent hand dermatitis in nurses working in the National Health Service

• **UK**: Ira Madan, Vaughan Parsons
• **Aim**: to test the hypothesis that a behavioural change intervention to improve hand care, based on the theory of planned behaviour and implementation intentions, coupled with provision of hand moisturisers, can produce a clinically useful reduction in the occurrence of hand dermatitis when compared to standard care in at-risk nurses working in the National Health Service (NHS).
Prevention of Occupational Hand Eczema among Nurse students

- **Romania**: GS Tiplica, H Moldovan, A Lupu, A Tatu, L. Valcu, I. Manole, A. Suru, C. Salavastru

- **Aim**: to investigate whether evidence-based intervention can reduce the prevalence of occupational hand eczema among nurse students.

- Data collected using Nordic Occupational Skin Questionnaire –NOSQ-UK-LONG-2002

- **Study Population**: 102 nurse students from Bucharest, Targu Mures and Galati
Results

How many times do you wash your hands during a normal working day?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Without history of eczema</th>
<th>History of eczema</th>
</tr>
</thead>
<tbody>
<tr>
<td>more than 20 times</td>
<td>52</td>
<td>6</td>
</tr>
<tr>
<td>11-20 times</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>6-10 times</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>0-5 times</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
In Romania, the 1st national conference on OSD was carried out in November 2015 with the support of the Action chair and other Action representatives who focused on the international prevalence of OSD.
Experts meeting
“Occupational skin protection against solar UV”
Berlin
Monday, 20 February 2017

- Agreed upon parameters for effective and efficient sunscreens: SPF level, galenics, ingredients, application, education.

- Overview of existing studies on effectiveness of sunscreens for the prevention of OSC

- Systematic literature review (September- December 2017)
### Systematic review

**“Effective and efficient sunscreens for individuals with severely photo-damaged skin and/or high occupational UV-exposure”**

<table>
<thead>
<tr>
<th>Research question</th>
<th>Patients/persons</th>
<th>Intervention</th>
<th>Comparison</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| A                 | Adult healthy volunteers | Standardised application of well-defined sunscreen | No application of sunscreen (inter- or intra-Individual, depending on Outcome) | - Vitamin D as a marker? (insensitive)  
- DNA photo-adducts (dimers) in Urine (CPD)  
- ROS in urine  
- C-UCA in urine [total amount, not ratio]?  
- Tape strips UCA-?  
- Artificial sunburn / COLIPA in-vivo  
- NOTE SAMPLING ACCURACY of all these biomarkers |
| B                 | Humans (all ages, immunocompetent and – suppressed) | Real-life application of sunscreens | “Normal care”, ie., spontaneous behavior | - Photodamage  
- Sunburn  
- Actinic keratoses  
- SCC |
|                   | Melanocytic nevi  
|                   | Malignant melanoma | Humans (all ages, immunocompetent and – suppressed) | Real-life application of sunscreens | “Normal care”, ie., spontaneous behavior |
| D                 | Adult outdoor workers (volunteers) | Real-life application of sunscreens | “Normal care”, ie., spontaneous behavior | - Photodamage  
- Carcinoma / carcinomata in situ |
| E                 | Patients with AK, SCC, BCC (recognized cases) | Prevention: per capita costs (average costs for organizational measures/textiles/sunscreens) |  | - QUALys  
- Burden of disease  
- Loss of productivity |
Training course of OSC in Modena (05-07 Sept 2016)

Course Schedule
Training School on Occupational Skin Cancers (OSCs)

05 – 07 September 2016
Hospital "Polichnico", via Del Pozzo 71, Modena (Italy)

Local organizer:

Prof. Dr. Fabrizio Maria Gobba, Dr. Alberto Modenesi – Chair of Occupational Medicine
University of Modena & Reggio Emilia, Modena, Italy

Prof. Dr. Giovanni Pellecari, Dr. Francesca Fornetani – Chair of Dermatology
University of Modena & Reggio Emilia, Modena, Italy

COST is supported by the EU Framework Programme Horizon
2020
Short Term Scientific Missions

Reports 1st Grant Year
1. José Hernan Alfonso (31 March - 4 April 2014, University Hospital Gentofte, Copenhagen, Denmark)
2. Stefana Cretu (6 - 18 April 2014, Medical School, University of Vienna, Austria)
3. Laura Nedelcu (6 - 18 April 2014, Medical School, University of Vienna, Austria)
4. Anca Stanciu (6 - 18 April 2014, Medical School, University of Vienna, Austria)

Reports 2nd Grant Year
1. Marcella Mauro (23 - 29 August 2014, Karolinska Institutet, Stockholm, Sweden)
2. Marija Bubas (20 - 24 October 2014, University of Osnabrück, Germany)

Reports 3rd Grant Year
1. Jose Hernán Alfonso (2 - 21 August 2015, Sociedad Argentina de Dermatologia, Buenos Aires, Argentina)
2. Stefana Cretu (14 - 19 February 2016, Coronel Institute, Amsterdam, Netherlands)
3. Ionela Manole (15 - 19 February 2016, Coronel Institute, Amsterdam, Netherlands)
4. Alberto Modenese (6 - 19 March 2016, Coronel Institute, Amsterdam, Netherlands)

Reports 4th Grant Year
1. Alexandra-Irina Butacu (20 - 26 March 2017, University of Modena and Reggio Emilia, Italy)
2. Jose Hernán Alfonso (24 - 31 March 2017, Coronel Institute of Occupational Medicine Amsterdam, Netherlands)
• **Information leaflet** for outdoor workers based on already existing brochures from e.g. Australia.

• ENGL, RO…

*R. Brans, A. Butacu, C. Salavastru, M. Melikoglu, GS. Tiplica*
Horizon 2020...

Too far away?

- Evaluation of prevention programmes for occupational skin diseases in hairdressers and its transferability across Europe (EPOSH)

- Occupational skin diseases: Interventions for improved prevention of contact dermatitis and sun-induced skin cancer (OCCUDERM)

- Very time-consuming applications under HORIZON 2020 failed in the final evaluation cycle.
Occupational skin diseases – the challenges ahead
• Drafting a **photographic guide** which should enable occupational physicians to differentiate the various morphological features of hand eczema in order to use scores for assessment of hand eczema.

• *Initiated by dr. Marie Noelle Crepy*
CALL TO ACTION TO THE EUROPEAN COMMISSION ON THE PROTECTION OF OUTDOOR WORKERS FROM OCCUPATIONAL SKIN CANCER

- Skin cancer awareness day
- EU Parliament sessions: 2015, 2016, 2017
Future agenda

• National Programme for Early Detection of OSC

• Up-dating health legislation to add UV radiation as recognized carcinogen

• Telemedicine programs for remote areas
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