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Programme and Abstracts

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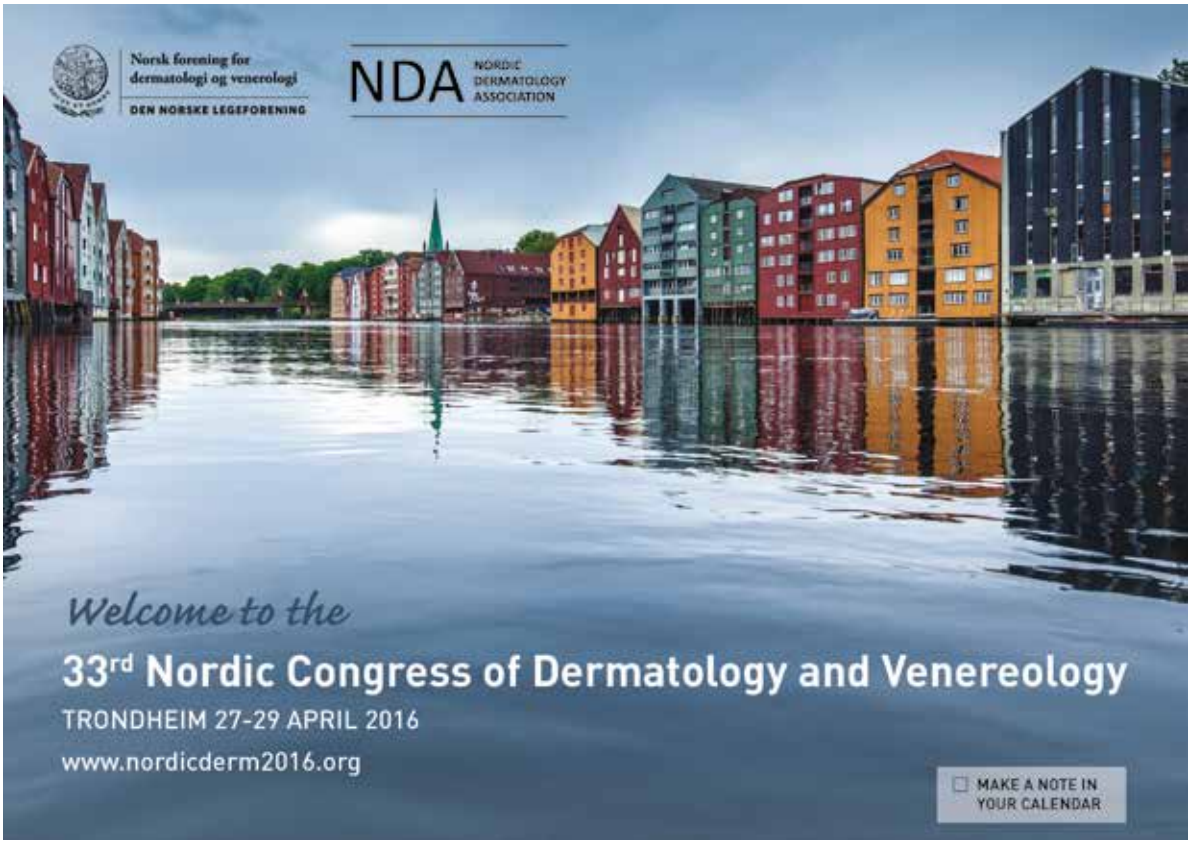
33rd Nordic Congress of Dermatology and Venereology

27–29 April 2016 in Trondheim, Norway



Programme and Abstracts

Board Report for the Nordic Dermatology Association 2013–2015

Warm thanks to the Finnish Dermatological Society and the sponsors for organizing a splendid 32nd Nordic Congress of Derma-to-Venereology in Tampere in August 2013. It set start for the second century of Nordic dermatology congresses.

Since the congress in Tampere, the board of NDA has gathered twice yearly. Encouraged by the suggestions of the General Assembly, we discussed three main issues:

- the statutes of NDA,
- education programs, and
- the next Nordic congress in Trondheim.

In 2013 we introduced our homepage www.nordicdermatology.com to communicate progress of our work and to get input for new tasks.

A committee, including Petter Gjersvik, Robert Gniadecki and Olle Larkö, was elected to evaluate and modernize the present statutes. They met in Oslo and proposed new Bylaws that were discussed at NDA board meeting in Copenhagen in May 2015 and sent later to the national Boards of the Dermatologic Societies. The main change is that NDA – an organization of individual Nordic dermatologists will become an association of the five Nordic societies of dermatology and venereology. We believe that the boards of the national dermatologic societies will become more influential with support of each other. The new statutes (see page 46–48) will be voted on at the General Assembly at the 33rd Nordic Congress of Dermatology and Venereology.

In August 2014, Robert Gniadecki, Gregor Jemec and John Paoli organized the first *NDA course on Skin Surgery* in Copenhagen. This two days hands-on course was very appreciated and has been repeated twice since then. The members of NDA Education Committee met in Stockholm in February 2015. They reviewed the present courses for residents in dermatology and venereology in the Nordic countries and suggested a frame of future NDA courses as well as guidelines for course proposals. The second NDA course, on Dermoscopy, is organized by John Paoli in Gothenburg in April this year. If you have ideas for new courses, please contact the NDA Education Committee.

The Norwegian Congress Committee has composed an excellent scientific program. Young investigators have submitted many interesting abstracts of very high quality and were awarded with NDA travel grants for this congress.

We wish you an interesting reading of this book and look very much forward to the 33rd Nordic Dermatology Congress in Trondheim

On behalf of the NDA-board

Joanna Wallengren, MD, PhD
NDA Secretary General and Treasurer

Welcome to Trondheim!

We wish you welcome to the 33rd Nordic Congress of Dermatology and Venereology in Trondheim on April 27–29, 2016.

The aim of the congress is to increase the contact and cooperation between dermatologists and venereologists in the Nordic countries, and to give an up-date on scientific progress and clinical practice in this exiting field of medicine. We are happy to present the abstracts of the oral and poster presentations in this supplementary issue of Forum for Nordic Dermato-Venereology.

The Nordic countries share common history, culture and way of thinking. That is why we believe that the Nordic Dermatology Association and its Nordic congresses continues to have an important role in dermatology and venereology in each of the Nordic countries, supplementing other organizations and meetings.

Previous Nordic congresses in Norway have been held in Oslo and Bergen. This time we will gather in the religious capital of Norway, Trondheim, which is also an important scientific and academic centre. The Norwegian University of Science and Technology was founded here in 1910, with its Faculty of Medicine added in 1975. The university has a strong academic record with two recent Nobel prize laureates in physiology and medicine.

We wish you welcome to 3 inspiring days of scientific interaction and social gathering in Trondheim!

On behalf of the congress committee

33rd Nordic Congress of Dermatology and Venereology:

Kristin Ryggen, MD	*Marit Saunes, MD PhD*	*Petter Gjersvik, MD PhD*
Congress President	Congress Secretary	Chair, Program Committee

Organizer:
Norwegian Society of Dermatology and Venerelogy on behalf of Nordic Dermatology Association

Congress committee:
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Xiaotong Li
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Technical organizer:
Congress Conference Norway

SESSION SCHEDULE

		Abstract No.	Room
Wednesday, April 27, 2016			
10:00–18:00	Registration		Foyer
12:30–13:30	LUNCHEON		
13:30–13:45	OPENING REMARKS		Olav Tryggvason
13:45–14:15	Keynote lecture 1: MELANOMA – CAN´T NORWEGIANS SPOT A KILLER WHEN THEY SEE ONE? *Per Helsing, Norway*	KN-1	Olav Tryggvason
14:15–15:15	Session 1: MALIGNANT MELANOMA *Chairs: Ingeborg M. Bachmann & Laura Bouchard*		Olav Tryggvason
	Prevention and Early Detection of Melanoma *Laura Bouchard, Finland*	S01-1	
	Dermatoscopic Examination of Pigmented Lesions. An Interactive Lecture *Henrik Lorentzen, Denmark*	S01-2	
	Targeted Therapy in Malignant Melanoma *Oddbjørn Straume, Norway*	S01-3	
	Aggressive Malignant Melanoma Arising From a Giant Congenital Melanocytic Nevus With Proliferative Nodules *Daniel de la Rosa-Carrillo[1]; Harald Vindenes[1]; Svetlana Tafjord[1]; Veronica Kinsler[2]; Ole Petter Fraas Cla Clausen[1], [1]Norway; [2]United Kingdom*	S01-4	
15:15–15:45	EXHIBITION AND POSTER VISIT		Foyer
	Reduction in ERRalpha Is Associated With Lichen Sclerosus and Vulvar Squamous Cell Carcinoma *Maria Lagerstedt; R. Huotari-Orava; R. Nyberg; J. Mäenpää; E. Snellman; S-L. Laasanen, Finland*	P-01	
	Trichomonas Vaginalis Infections Are Rare in The Young STI Population in Sweden *Helena Pellrud; D. Golparian; C. Steczkó-Nilsson; M. Falk; H. Fredlund; M. Unemo, Sweden*	P-02	
	Dermatitis Artefacta: Still Underdiagnosed in 2015 *Nicolas Kluger, Finland*	P-03	
	Pooled Safety Analysis of Apremilast Up To 182 Weeks: Results From Phase 3 Clinical Trials *N. Pontynen[1]; K. Papp[2]; J.M. Sobell[3]; K. Shah[3]; R.M. Day[3]; R. Chen[3]; C. Paul[4], [1]Finland; [2]Canada; [3]United States; [4]France*	P-04	
	Cutaneous Collagenous Vasculopathy: Report of 4 Cases *Nicolas Kluger[1]; Marie-Hélène Jégou[2]; Laurine Marty[2], [1]Finland; [2]France*	P-05	
	Tattooing in Finland: a Survey in a Tattoo Convention *Nicolas Kluger, Finland*	P-06	
	Compliance To Laboratory Controls For Monitoring Methotrexate Toxicity in Patients with Psoriasis *S Sandberg; K-J Hellgren, Sweden*	P-07	
	The Effect of Narrow-Band UVB-radiation to The Serum 25(OH)D3 Concentrations and Mood According to The Seasonality on Healthy Volunteers *Anna Jussila; M. Ala-Houhala; T. Karppinen; H. Kautiainen; T. Partonen; E. Snellman, Finland*	P-08	
	Mast Cell Chymase Reduces Migration of Melanoma Cells *H. Siiskonen; I.T. Harvima, Finland*	P-09	
	Clinical Outcome From Narrowband UVB Phototherapy To The Quality of Life and Disease Severity in Patients with Psoriasis or Atopic Dermatitis *Toni Karppinen; L. Väkevä; M.J. Ala-Houhala; R. Pasternack; A. Hannuksela-Svahn; A. Hjerppe; A. Joensuu; M. Soronen; S. Niemelä; L. Ylianttila; R. Pastila; T. Reunala; E Snellman, Finland*	P-10	

	Abstract No.	Room
Human Skin Mast Cells Express Photoreceptors *H. Siiskonen[1]; S. Buscone[2]; I. Castellano Pellicena[2]; J. Scheffel[1]; N.E. Uzunbajakava[3]; N.V. Botchkareva[2]; M. Maurer[1], [1]Germany; [2]United Kingdom; [3]Netherlands*	P-11	
Medical Adherence to Topically Prescribed Corticosteroids and Corticosteroid/Calcipotriol Combinations in Treatment of Psoriasis *Mathias Tiedemann Svendsen; Jakob Hansen; Helle Johannessen; Flemming Andersen; Klaus Ejner Andersen, Denmark*	P-12	
Generalized Pustular Psoriasis in a 10-month-old Girl *Kristian Enerstvedt; T.J. Thune, Norway*	P-13	
Isotretinoin Exposure During Pregnancy: a Population-based Study in Finland *Erika Wikström; H-M. Surcel; E. Huovinen; A-M. Lahesmaa-Korpinen; H. Malm; M. Gissler, Finland*	P-14	
The Effect of Narrowband UVB Treatment on The Skin Microbiome in Patients With Chronic Plaque Psoriasis – A Pilot Study *M. Assarsson; A. Duvetorp; O. Dienus; J. Söderman; O. Seifert, Sweden*	P-15	
Hidradenitis Suppurativa is Characterized by Pain, Pruritis and Malodour. a Study of Self-reported Quantitative Data *Peter Theut Riis; H.C Ring; G.B.E. Jemec, Denmark*	P-16	
Sustained Efficacy of Apremilast in Patients With Moderate to Severe Psoriasis Who Continued on Apremilast or Switched from Etanercept *N. Pontynen[1]; K. Reich[2]; K. Papp[3]; P. Van de Kerkhof[4]; Z. Zhang[5]; K. Nograles[5]; J. Soung[5], [1]Finland; [2]Germany; [3]Canada; [4]Netherlands; [5]United States*	P-17	
Psoriasis and Depression, a Sex and Age Dependent Association *Albert Duvetorp; M. Nilsson; V. Nordling; O. Seifert, Sweden*	P-18	
Effectiveness and Safety of Secukinumab in 45 Patients With Moderate To Severe Plaque Psoriasis Refractory To Traditional Biologic Drugs *J.F. Schwensen; A. Clemmensen; C. Sand; R. Gniadecki; S.F. Thomsen, Denmark*	P-19	
Histologic Study of Basal Cell Carcinomas Recurring After Photodynamic Therapy: A Comparative Analysis Against its Primary Tumors *J.L. Bernabo[1]; N. López Navarro[2]; E. Gallego Domínguez[2]; M. Zmudzinska[1]; E. Herrera Ceballos[2], [1]Norway; [2]Spain*	P-20	
C3 and Complement Factor B Regulate Growth of Cutaneous Squamous Cell Carcinoma *P. Riihilä; L. Nissinen; M. Farshchian; M. Kallajoki; A. Kivisaari; S. Meri; R. Grénman; T. Pihlajaniemi; R. Heljasvaara; S. Peltonen; J. Peltonen; V.M. Kähäri, Finland*	P-21	
Imaging of Squamous Cell Carcinoma, Bowen's Disease and Actinic Keratosis Vasculature Using Dynamic Optical Coherence Tomography *L. Themstrup[1]; G.B.E. Jemec[1]; M. Ulrich[2], [1]Denmark; [2]Germany*	P-22	
Attitudes Towards Sunbathing and Indoor Tanning in Finland *E. Yli-Uotila; M. Ala-Houhala; S. Pirkola; E. Snellman, Finland*	P-23	
Infections in Moderate-to-severe Psoriasis Patients Treated With Biologic Drugs Compared to Classic Systemic Drugs: Results of the BIOBADADERM Registry *Paula Dávila-Seijo[1]; Esteban Dauden[2]; Gregorio Carretero[2]; Carlos Ferrándiz[2]; Francisco Vanaclocha[2]; Francisco-José Gómez-García[2]; Enrique Herrera-Ceballos[2]; Pablo De la Cueva-Dobao[2]; Isabel Belinchón[2]; Jose-Luis Sánchez-Carazo[2]; Merce Alsina[2]; Jose-Luis López-Estebaranz[2]; Marta Ferrán[2]; Rosa Torrado[2]; José-Manuel Carrascosa[2]; Mar Llamas[2]; Raquel Rivera[2]; Rafael Jiménez-Puya[2]; Ignacio García-Doval[2], [1]Sweden; [2]Spain*	P-24	
Analyzing Renal Function in Patients with Hidradenitis Suppurativa by Using Urine Samples *Christine Ardon[1]; I. Deckers[2]; J.C. Pascual Ramírez[3]; K. Zarchi[1]; I. Miller[1]; D.M.L. Saunte[1]; G.B.E. Jemec[1]; E.P. Prens[2], [1]Denmark; [2]Netherlands; [3]Spain*	P-25	
Antibiotic Susceptibility Testing of Planktonic and Biofilm Forms of Clinical Staphylococcus Lugdunensis Isolates of Hidradenitis Suppurativa Patients	P-26	

		Abstract No.	Room
	Christine Ardon[1]; K. Fuursted[1]; G.B.E. Jemec[1]; E.P Prens[2]; H. Jenssen[1], [1]Denmark; [2]Netherlands		
	Photodynamic Therapy in the Treatment of Lentigo Maligna Using 5-aminolaevulinic Acid (Ameluz) as a Light Sensitizer – a Study in Progress *J. Räsänen; N. Neittaanmäki-Perttu; M. Salmivuori; L. Jeskanen; E. Snellman; M. Grönroos, Finland*	P-27	
	Fertility, Induced Abortions, Pregnancies and Deliveries Among Patients With Neurofibromatosis 1 *Jussi Leppävirta; R Kallionpää; E Uusitalo; T Vahlberg; S Timonen; J Peltonen; S Peltonen, Finland*	P-28	
	The Clinical Time Course of Allergic Contact Dermatitis Following Repeated Challenges with Diphenylcyclopropenone in De Novo Sensitized Individuals *K.F. Mose; F. Andersen; M.A. Røpke; L. Skov; P.S. Friedmann; K.E. Andersen, Denmark*	P-29	
	Real Life Data on Psoriasis Patients Treated With Remsima. Are There Any Signals of Difference from Remicade? *Kåre Steinar Tveit, Norway*	P-30	
15:45–16:15	Keynote lecture 2: SKIN BARRIER FUNCTION IN RESEARCH AND CLINICAL PRACTICE *Tove Agner, Denmark*	KN-2	Olav Tryggvason
16:15–17:15	Session 2: CONTACT DERMATITIS AND DRUG REACTIONS *Chairs: Joar Austad & Magnus Bruze*		Olav Tryggvason
	Severe Cutaneous Adverse Drug Reactions and Patch Testing *Jussi Liippo, Finland*	S02-1	
	The Therapeutic Potency of Topical Corticosteroids on Diphenylcyclopropenone Induced Allergic Contact Dermatitis in Healthy Volunteers *K.F. Mose[1]; F. Andersen[1]; M.A. Røpke[1]; L. Skov[1]; P.S. Friedmann[2]; K.E. Andersen[1], [1]Denmark; [2]United Kingdom*	S02-2	
	All You Wanted To Know About Patch Testing, But Didn't Dare To Ask *Magnus Bruze, Sweden*	S02-3	
17:15–17:45	EXHIBITION AND POSTER VISIT		Foyer
18:30–19:30	RECEPTION, WINE and MUSIC		
19:30–00:00	Evening free		

Thursday, April 28, 2016

09:00–09:30	Keynote lecture 3: FRAUD AND MISCONDUCT IN MEDICAL SCIENCE *Magne Nylenna, Norway*	KN-3	Olav Tryggvason
09:40–10:40	Session 3: HIDRADENITIS SUPPURATIVA *Chairs: Karin Sartorius, Gregor Jemec & Øystein Grimstad*		Olav Tryggvason
	The Pathogenesis of Hidradenitis Suppurativa *Øystein Grimstad, Norway*	S03-1	
	Prevalence and Comorbidities of Hidradenitis Suppurativa *Gregor B.E. Jemec, Denmark*	S03-2	
	Treatment of Hidradenitis Suppurativa *Karin Sartorius, Sweden*	S03-3	
	Surgical Management of Hidradenitis Suppurativa *Gisli Ingvarsson, Norway*	S03-4	
09:40–10:40	Session 4: TEACHING AND PATIENT EDUCATION *Chairs: Brita Pukstad & Sirkku Peltonen*		Haraldsalen
	Interprofessional Training in Dermatology *Desiree Wiegleb Edström; A. Friman; S. Edelbring, Sweden*	S04-1	

		Abstract No.	Room
	How To Use Internet in Teaching Dermatology *Sirkku Peltonen, Finland*	S04-2	
	Objective, Structured Clinical Exams in Dermatology for Medical Students *Petter Gjersvik, Norway*	S04-3	
	Web-Based Consultations and Counseling for Parents of Children with Atopic Dermatitis *Thomas Schopf, Norway*	S04-4	
10:40–11:15	EXHIBITION AND POSTER VISIT		Foyer
11:15–12:30	Session 5: SKIN CANCER AND EMERGING TREATMENT MODALITIES *Chairs: Ingrid Roscher & John Paoli*		Olav Tryggvason
	Long-Term Results From Photodynamic Treatment in Basal Cell Carcinoma *Eidi Christensen, Norway*	S05-1	
	Mohs Surgery – Indications, Technique and Alternatives *John Paoli, Sweden*	S05-2	
	Long-term Outcome of Daylight Photodynamic Therapy with 5-aminolaevulinate Nanoemulsion (BF-200 ALA) and Methyl-5-aminolaevulinate (MAL) for AKs *Noora Neittaanmäki-Perttu; Mari Grönroos; Taneli Tani; Erna Snellman, Finland*	S05-3	
	Skin Dysplasia Treated with Fractional Laser and Anti-cancer Drugs *Merete Haedersdal, Denmark*	S05-4	
	Vismodegib Treatment of Advanced and Metastatic Basal Cell Carcinoma *Sari Koskenmies, Finland*	S05-5	
11:15–12:30	Session 6: SEXUALLY TRANSMITTED INFECTIONS *Chairs: Anne Olaug Olsen & Arne Wickström*		Haraldsalen
	On the Spot-Diagnosis of Sexually Transmitted Infections *Harald Moi, Norway*	S06-1	
	Can We Prevent Penile and Extra-Genital Cancer by Including Boys in The HPV Vaccination Program? *Arne Wikström, Sweden*	S06-2	
	High-Resolution Anoscopy and Anal Intraepithelial Neoplasia – Starting from Scratch in the Nordic Countries *Helle Kiellberg Larsen, Denmark*	S06-3	
	Genital Herpes Virus Infections – An Update *Petra Tunbäck, Sweden*	S06-4	
	Mycoplasma Genitalium – Where Do We Go From Here? *Brita Pukstad; Marianne Gossé; Svein Arne Nordbø, Norway*	S06-5	
12:30–13:30	LUNCHEON		
13:30–14:00	Keynote lecture 4: THE RETURN OF "OLD" SEXUALLY TRANSMITTED INFECTIONS *Eija Hiltunen-Back, Finland*	KN-4	Olav Tryggvason
14:00–15:15	Session 7: FREE COMMUNICATIONS *Chairs: Lars Prestegarden & Teea Salmi*		Haraldsalen
	Somatic Mutations of GNAQ Are Enriched in Endothelial Cells in Sturge-Weber Syndrome *Olav Sundnes; Roar Fjær; Hanne Hjorthaug; Ying Sheng; Clara Hammarström; Jan Cezary Sitek; Guttorm Haraldsen; Kaja Selmer, Norway*	S07-1	
	Validation of Dynamic Optical Coherence Tomography For in Vivo Microcirculation Imaging of the Skin *L. Themstrup[1]; S. Ciardo[2]; G. Pellacani[2]; Welzel Julia[3]; M. Ulrich[3]; G.B.E. Jemec[1], [1]Denmark; [2]Italy; [3]Germany*	S07-2	
	Application of Patient-derived Melanoma Xenografts For Drug Development	S07-3	

		Abstract No.	Room
	Lars Prestegarden; Terje Sundstrøm; Rolf Bjerkvig; Frits Thorsen, Norway		
	Merkel Cell Carcinoma Incidence is Increasing in Sweden *Oscar Zaar; Ann-Marie Larkö Wennberg; Martin Gillstedt; Bernt Lindelöf; John Paoli, Sweden*	S07-4	
	Incidence, Mortality and Cancer Risk of Neurofibromatosis Type 1 *Sirkku Peltonen; E. Uusitalo; M. Rantanen; R. Kallionpää; M. Pöyhönen; J. Leppävirta; J. Pitkäniemi; J. Peltonen, Finland*	S07-5	
	Is Clinical Subtyping of Hidradenitis Suppurativa by Topography Affected Possible? *L. Thorlacius; P. Theut Riis; E.K. List; R. Christensen; G.B.E. Jemec, Denmark*	S07-6	
14:00–15:15	Session 8: FREE COMMUNICATIONS *Chairs: Katarina Zak Stangeland & Bolli Bjarnason*		Olav Tryggvason
	Effect of Water Hardness and Season of Birth on Atopic Dermatitis in Children: A Study Within The Danish National Birth Cohort *K. Engebretsen; P. Bager; J. Wohlfahrt; L. Skov; C. Zachariae; A.M.N. Andersen; J.D. Johansen; M. Meldby; J.P. Thyssen, Denmark*	S08-1	
	Quality of Life and Disease Severity in Patients With Atopic Dermatitis *Jesper Holm; T. Agner; M.L. Clausen; S.F. Thomsen, Denmark*	S08-2	
	Validity of Self-reported Psoriasis in a General Population: The HUNT Study, Norway *E.H. Modalsli[1]; I. Snekvik[1]; B.O. Åsvold[1]; P.R. Romundstad[1]; L. Naldi[2]; M. Saunes[1], [1]Norway; [2]Italy*	S08-3	
	Clinical Features, History of Diseases and Pharmacological Therapies of Bullous Pemphigoid in a Finnish Cohort *Anna Pankakoski; Annamari Ranki; Nicolas Kluger, Finland*	S08-4	
	A Case Report. Pulsed Intravenous Immunoglobulin in The Treatment of Livedoid Vasculopathy *Olaf Antonsen, Norway*	S08-5	
	Infant With Harlequin Ichthyosis Developing Osteopenia and Multiple Fractures During Acitretin Therapy *Jan Cezary Sitek; P.A. Tølløfsrud; K.A. Tønseth, Norway*	S08-6	
	AWARE: a Non-interventional Scandinavian Study to Evaluate the Burden of Disease in Patients with Chronic Urticaria: a Baseline Presentation *S.F. Thomsen[1]; E.C. Pritzier[2]; C.D. Anderson[3]; N. Vaugelade-Baust[3]; R. Dodge[3]; A-K. Dahlborn[3]; C. Vestergaard[1], [1]Denmark; [2]Norway; [3]Sweden*	S08-7	
15:15–15:45	EXHIBITION AND POSTER VISIT		Foyer
15:45–16:15	Keynote lecture 5: REDUCING AVOIDABLE WASTE IN ECZEMA RESEARCH *Hywel Williams, United Kingdom*	KN-5	Olav Tryggvason
16:15–17:15	Session 9: ATOPIC ECZEMA *Chairs: Teresa Løvold Berents & Maria Bradley*		Olav Tryggvason
	Prevention of Atopic Eczema – Is It Possible? *Maria Bradley, Sweden*	S09-1	
	Filaggrin Null Mutations Do Not Predict Atopic Dermatitis Treatment Response in the Finnish Founder Population *Ville Kiiski; T. Luukkonen; M. Ahola; E. Salminen; J. Mandelin; H. Virtanen; M. Pöyhönen; S. Kivirikko; I. Surakka; S. Reitamo; M. Heliövaara; A. Palotie; A. Remitz, Finland*	S09-2	
	Risk of Type 2 Diabetes Mellitus in Patients With Atopic Dermatitis: a Population-based Cohort Study *Yuki Andersen; A. Egeberg; L. Skov; G. Gislason; J.P. Thyssen, Denmark*	S09-3	
	Biological Drugs and Other Systemic Treatments for Atopic Dermatitis *Mette Deleuran, Denmark*	S09-4	
18:30–19:30	ORGAN CONCERT IN NIDAROS CATHEDRAL: Guttorm Guleng, dermatologist		Nidarosdomen
20:00–00:00	CONGRESS DINNER		

Friday, April 29, 2016

		Abstract No.	Room
08:30–09:30	NORDIC DERMATOLOGY ASSOCIATION GENERAL ASSEMBLY (see agenda on p. 49)		Olav Tryggvason
09:30–10:00	Keynote lecture 6: SKIN CANCER IN ORGAN TRANSPLANT RECIPIENTS: IMMUNOSUPPRESSION-INDUCED OR IMMUNOSUPPRESSANT-INDUCED? *Günther Hofbauer, Switzerland*	KN-6	Olav Tryggvason
10:00–10:30	EXHIBITION AND POSTER VISIT		Foyer
10:30–11:45	Session 10: PSORIASIS *Chairs: Cato Mørk & Lars Iversen*		Olav Tryggvason
	Hunting For Genes That Affect Psoriasis in ~2,900 Cases and ~48,000 Controls *M. Løset[1]; E.H. Modalsli[1]; I. Snekvik[1]; W. Zhou[2]; Y. Chu[1]; M.E. Gabrielsen[1]; O.L. Holmen[1]; P.R. Romundstad[1]; G. Abecasis[2]; C. Willer[2]; K. Hveem[1]; M. Saunes[1], [1]Norway; [2]United States*	S10-1	
	The Number of Foxp3-positive Cells and Their Contacts With Tryptase-positive Mast Cells Increase in The Tape-stripped, Köbner-negative, Psoriatic Skin *M.-M. Suttle; I.T. Harvima, Finland*	S10-2	
	Is the Prevalence of Psoriasis Increasing? Results from a Population-based Cohort Study in Norway *K. Danielsen; A.O. Olsen; T. Wilsgaard; A.S. Furberg, Norway*	S10-3	
	The Effect of Weight Reduction in Patients with Psoriasis *Lone Skov, Denmark*	S10-4	
	The Use of Topical Psoriasis Treatment in Different Regions of The World *Lars Iversen, Denmark*	S10-5	
11:45–12:15	Keynote lecture 7: NOVEL SYSTEMIC PSORIASIS TREATMENTS *Mona Ståhle, Sweden*	KN-7	Olav Tryggvason
12:15–12:30	CLOSING REMARKS		Olav Tryggvason
12:30–13:30	LUNCHEON		

Abstracts for Oral Presentation: Key Note Lectures

KN-1

MELANOMA – CAN'T NORWEGIANS SPOT A KILLER WHEN THEY SEE ONE?

*Helsing, Per**

Oslo University Hospital, Norway

The mortality rate for cutaneous melanoma (CM) in Norway is the highest in Europe, and higher than in countries with comparable incidence rates.

Using population-based data from the Norwegian Malignant Melanoma Registry/the Norwegian Cancer Registry and the national Cause of Death Registry, we studied sex, age, residency, tumour location and histopathological characteristics of the primary tumour for all CM cases in Norway in the period 2008–2012 (n=8,120), and the associations between these factors and CM specific death. Knowledge from this study could help targeting secondary preventive measures towards the Norwegian population.

We found that men were diagnosed at higher age, with thicker, more often ulcerated tumours and more advanced clinical stage than women (p<0.001). During the follow-up to 30th June 2015, 992 died due to CM, representing 58% of all deaths and 89% of all deaths in the age group <50 years. A high frequency of fatal melanomas was nodular CM (55%). Low survival was observed for CM with unspecified T-stage. Sex, age, anatomical location, tumour thickness, ulceration, clinical stage and the incidence of a new primary CM were the significant predictors of CM specific death (p<0.001) in a Cox regression analysis.

Data from the Norwegian Malignant Melanoma Registry suggests that the high CM specific mortality rate in Norway result from more advanced disease at diagnosis compared with other population-based registries. The high frequency of NM in both incident and fatal cases of CM indicate biological issues contributing to high mortality rates in Norway that must be explored further. Most advanced disease and highest risk of CM specific death were found in older patients (≥70 years), particularly men. Efforts should be made to improve secondary prevention of CM, especially among the elderly, and must target the characteristics of NM.

KN-2

SKIN BARRIER FUNCTION IN RESEARCH AND CLINICAL PRACTICE

*Agner, Tove**

University of Copenhagen, Denmark

Skin barrier integrity is important with respect to regulation of inside-out hydration, and with respect to penetration outside-in of chemicals, allergens and infectious agents. Skin barrier integrity may be challenged by inflammation in the skin, however, oppositely skin barrier disruption may by itself lead to inflammation. Much focus has been on skin barrier function since the discovery of filaggrin mutations a decade ago, however, many other biomarkers are involved in keeping the integrity of the barrier.

Skin barrier in atopic dermatitis is known to be compromised, and as a clinical consequence atopic eczema is known as a significant predictor for development of hand eczema. Additionally, new studies are relating the impaired barrier function to type 1 allergies in atopics. Filaggrin mutations are associated with increased TEWL values, however, While filaggrin mutations have a negative impact with respect to prognosis of atopic dermatitis and increase the risk for development of hand eczema in atopics, however. filaggrin mutations alone does not seem to present an independent increased risk of hand eczema.

Impaired barrier function attracts bacteria. In particular staphylococcus aureus is important for flares in atopic dermatitis, and host-microbe interactions may play an important role in the pathogenesis of the disease. Future research within the relationship between the cutaneous microbiome and skin barrier function in AD may lead to better understanding of pathogenesis, and new approaches to treatment of the disease.

KN-3

FRAUD AND MISCONDUCT IN MEDICAL SCIENCE

*Nylenna, Magne**

University of Olso, Norway

There is no distinct line between ethical and non-ethical behaviour. Scientific misconduct – conduct inconsistent with

accepted scientific standards – is a continuum ranging from honest errors to outright fraud. Honest errors are inevitable whereas intentional fraudulent behaviour is obviously unethical and illegal.

Although the precise frequency is unknown, the scientific community has failed to prevent misconduct, possibly because it represents such a range of issues at the edge of which many scientists have been.

In epidemiological terms we can think of scientific misconduct as an unhealthy condition that has different grades of seriousness and is diffused through the scientific community. Fraudulent cases and serious breaches of ethical rules should be identified and treated appropriately. In addition a strategy for mass prevention is needed. Research training must include ethical and legal issues. Current guidelines and regulations should be simplified and made readily available to researchers.

Most important is perhaps a thorough discussion of the academic system of reward and merit. How can the emphasis on productivity and the number of publications be reduced, and how can a more healthy culture of transparency and ethics be established?

KN-4

THE RETURN OF "OLD" SEXUALLY TRANSMITTED INFECTIONS

*Hiltunen-Back, Eija**

Helsinki University Central Hospital, Finland

Sexually transmitted infections (STIs) are the major public health concern. The WHO estimates that globally in 2013 there were almost 500 million new cases of four common curable STIs ; chlamydia, gonorrhea, syphilis and trichomoniasis. Besides every day over 1 million people acquire a STI. Travelling abroad has always played a major role in the spreading of STIs. The incidence of gonorrhea, syphilis and lymphogranuloma venereum (LGV) increased rapidly during the Second World War, but thereafter a significant decrease occurred after the introduction of penicillin. In mid 1990s due to the collapse of the Soviet Union and the opening of the borders the number of syphilis and gonorrhea cases increased first in Finland and later in the other European countries. Syphilis continues to present challenges to global public health even though the penicillin has been available since 1940s and Treponema pallidum has remained highly sensitive to it. We still have many congenital syphilis cases in Europe, which could be prevented by arranging systematic screening of pregnant women. LGV has been endemic in many parts of Africa, India, the Caribbean and Southeast Asia and only sporadically seen in Europe among travelers in recent decades. LGV is primarily a disease of lymphatic tissues and caused by serotypes L1, L2 and L3 of Chlamydia trachomatis. LGV reappeared to Europe in 2003 and the first cases were noticed among men having sex with men (MSM). Since then there has been minor outbreaks reported in several European countries.Travelling due to work or pleasure is more common than ever, people can easily reach the most distant parts of the world. The present migration crisis, that is facing the Europe, will also have an impact on the epidemiology of STIs. There is an urgent need to implement national and international surveillance programs in order to monitor the disease burden and arrange adequate health services.

KN-5

REDUCING AVOIDABLE WASTE IN ECZEMA RESEARCH

*Williams, Hywel**

Centre of Evidence-Based Dermatology, United Kingdom

Think honesty about why we do research and what happens to it. A viewpoint by Chalmers and Glasziou published in the Lancet in 2009 outlined the architecture of research waste. They fell into four main categories: (*i*) failing to ask questions of importance to clinicians and patients (*ii*) ignoring previous evidence and failing to adequately reduce bias (*iii*) failure to publish study results especially those with "negative" findings and (*iv*) failures to describe the interventions and all outcomes in a useable way. The waste is cumulative in that if 50% loss occurs at each of the last 3 stages, the cumulative loss of research value is around 85%. In my 35 years of research into eczema, I am aware that much research has been done with flagrant disregard for whether it could matter to patients, research that is designed and done poorly with little regard to existing evidence, publication bias towards "positive" findings and blatant selective reporting outcome bias. I do not want to sound sanctimonious as I have been partially guilty of all these failures. At our Centre of Evidence-Based Dermatology, we have tried to come to terms with these past failures and do something about it in the field of childhood atopic eczema – first by identifying and prioritising research questions that are important to clinicians and patients, learning from existing research published in systematic reviews, making sure that all our research is published regardless of the main results, and ensuring that our research is published completely and in a way that can be replicated or used by others. The problem of research waste belongs to us all – funders, researchers, research users, journal editors, and most of all the public who kindly give up their time without payment to help those that follow. It is time the dermatology research community got its act together. I hope this talk gives you some ideas of how to start.

KN-6

SKIN CANCER IN ORGAN TRANSPLANT RECIPIENTS: IMMUNOSUPPRESSION-INDUCED OR IMMUNOSUPPRESSANT-INDUCED?

*Hofbauer, Günther**

Universitätsspital Zürich, Switzerland

While receiving an organ transplant means the gift of life for a recipient, it also entails increased risks for other health conditions. Foremost, infections and cancers increase in incidence with squamous cell carcinoma of the skin increasing most dramatically. This increase in skin carcinogenesis occurs without delay after transplantation, probably because pent-up sun damage in the skin can now translate more easily into squamous cell carcinoma. The mechanisms behind this increase will be discussed in this presentation. We now recognize that UV-induced and drug induced immunosuppression impair the tumor defense by the immune system and alter quantity and quality of the inflammatory infiltrate. On the other hand, immunosuppressive drugs have features of their own beyond immunosuppression which are conducive skin cancer formation. Calcineurin inhibitors drive squamous cell carcinoma via the transcription factor ATF3, where azathioprine photosensitizes and increases photodamage to the skin. Prevention of skin cancer in organ transplant recipients should thus rely on strict photoprotection by behavior, clothing and use of sunscreen as well as on a diligent choice of immunosuppressants.

KN-7

NOVEL SYSTEMIC PSORIASIS TREATMENTS

*Ståhle, Mona**

Karolinska, Stockholm, Sweden

The outlook for patients with severe psoriasis has improved dramatically cover the past decade. We are currently experiencing a revolution in therapeutic potential and it has never been so gratifying to be a psoriasis doctor. Patients with devastating psoriasis can experience a psoriasis free life for the first time. But, for how long and at what cost? These are the difficult questions. Can we trust that the therapeutic successes that we experience will last and be safe in the long-term? The close surveillance of these new drugs, unparalleled with drugs in the past, seems reassuring and hopefully we will be able to spot potential signals and trends in time.

When looking at therapeutic options today we can clearly see that the deeper understanding of psoriasis pathogenesis and disease mechanisms are reflected in drug development. Experimental research and pharmaceutical development go hand in hand and drugs targeting putative key molecules and processes serve to validate their *in vivo* role in disease. The differences and similarities between drugs targeting TNF–alpha, IL12/IL23 and IL17A pathways – not only in efficacy on skin symptoms but also on effects in other organs such as brain and gut will teach us lessons about how the immune system works in different organs of the body. Such lessons will also serve to guide us in future therapeutic considerations. In addition to existing drugs we will discuss the pipeline in biologics as well novel oral drugs.

Abstracts for Oral Presentation: Session Lectures

S01-1

PREVENTION AND EARLY DETECTION OF MELANOMA

*Bouchard, Laura**

Helsinki University Central Hospital, Finland

Skin awareness campaigns aimed at reducing sun exposure and promoting early diagnosis of skin cancer are carried out in many western countries. However, the incidence of skin cancer continues to rise. Euromelanoma is a dermatologist–led campaign, which is carried out annually in over 30 European countries. During a "Euromelanoma screening day" anyone can have a skin examination performed by a dermatologist and participants are counselled about sun-smart behaviour, skin protection and warning signs of skin cancers. The impact of formal screening by whole-body skin examination for asymptomatic individuals on melanoma morbidity and mortality is not well studied, since randomized observation-controlled population-based trials are scarce. Screen-detected melanomas tend to be thinner than those detected when symptomatic but whether it translates into reduction in mortality is unproven. While the evidence is insufficient to support population screening, targeting high-risk individuals appears more effective. The optimal target population and screening program remain a matter of further discussion. Education for skin self-examination is widely encouraged.

S01-2

DERMATOSCOPIC EXAMINATION OF PIGMENTED LESIONS. AN INTERACTIVE LECTURE

*Lorentzen, Henrik**

Århus, Denmark

No abstract submitted

S01-3

TARGETED THERAPY IN MALIGNANT MELANOMA

*Straume, Oddbjørn**

Haukeland University Hospital, Norway

No abstract submitted

S01-4

AGGRESSIVE MALIGNANT MELANOMA ARISING FROM A GIANT CONGENITAL MELANOCYTIC NEVUS WITH PROLIFERATIVE NODULES

de la Rosa-Carrillo, Daniel[*1]; Vindenes, Harald[2]; Tafjord, Svetlana[2]; Kinsler, Veronica[3]; Clausen, Ole Petter Fraas[1]*

[1]Oslo University Hospital, Norway; [2]Oslo, University Hospital, Norway; [3]Great Ormond Street Hospital, United Kingdom

We report the case of a newborn boy who presented at birth a large multilobular hyperpigmented lesion that covered the whole lower trunk, the hip area and the proximal aspect of the lower extremities. In addition, there were multiple satellite lesions all over the body. The main lesion had a highly polymorphic clinical appearance. Ultrasound examination ruled out invasive growth to deeper abdominal structures. Magnetic resonance imaging of the central nervous system detected changes in the deeper aspects of the brain, compatible with neurocutaneous melanosis. The child was in good health and unaffected by the skin and brain changes. Multiple histological examinations from macules, patches and tumours were performed. Small satellite lesions were histologically compatible with melanocytic nevi. The remaining large lesions were histologically strikingly similar despite the clinical variation, and presented marked atypia and a high number of mitosis. BRAF and NRAS were negative in all histological samples. A conservative approach was determined and surgery was only performed to excise tumors that gave discomfort, the last one being an inguinal tumor with secondary hydrocele. This tumor quickly recurred. At the same time two subcutaneous tumors on each temple had developed, with no overlying skin changes. Further examinations confirmed both tumors to be metastases from malignant melanoma. In addition, new magnetic resonance imaging detected multiple metastatic lesions in the liver. The child passed away less than a month after metastases were confirmed. This case may represent an infantile malignant melanoma developing from a giant congenital melanocytic nevus, or a congenital malignant melanoma.

S02-1

SEVERE CUTANEOUS ADVERSE DRUG REACTIONS AND PATCH TESTING

*Liippo, Jussi**

Turku University Hospital, Finland

Severe cutaneous adverse drug reactions (CADRs) are occasionally seen in hospital settings and also in various outpatient

clinics. The causative drug is often difficult to identify as multiple drug therapies are commonly used at the same time. In a similar way, consecutive drug reactions may also develop leading to complex diagnostic challenge. Typically, multiple antibiotics and other drugs are used in empiric therapies to treat suspected resistant or unidentified microbes. Drug patch testing provides an important diagnostic method in efforts to identify the causative agents in delayed-type drug eruptions. Severe exanthematous adverse drug reactions, drug reaction with eosinophilia and systemic symptoms (DRESS), acute generalized exanthematous pustulosis (AGEP) and Stevens-Johnson syndrome/toxic epidermal necrolysis (SJS/TEN) are clinical situations that can be tried to diagnose and approach with drug patch testing. Various test concentrations, titration series or different vehicles can be used to increase the diagnostic accuracy. Occasionally, also intra-dermal testing and its delayed reading at e.g. day three is needed to reveal the offending drug. Controls are often required to exclude false positive reactions that may be due to drug-induced skin irritation. Finally, clinical drug exposure may be considered in selected patients with milder eruptions and with negative skin test results.

S02-2

THE THERAPEUTIC POTENCY OF TOPICAL CORTICOSTEROIDS ON DIPHENYLCYCLOPROPENONE INDUCED ALLERGIC CONTACT DERMATITIS IN HEALTHY VOLUNTEERS

Mose, K.F.[1]*; Andersen, F.*[1]*; Røpke, M.A.*[2]*; Skov, L.*[3]*; Friedmann, P.S.*[4]*; Andersen, K.E.*[1]

[1]*Dept. of Dermatology and Allergy Centre, Odense University Hospital, University of Southern Denmark, Denmark;* [2]*Department of Clinical Pharmacology, LEO Pharma, Denmark;* [3]*Department of Dermato-Allergology, Herlev and Gentofte Hospital, University of Copenhagen, Denmark;* [4]*Division of Infection, Inflammation & Immunity, Sir Henry Wellcome Laboratories, Southampton University Hospitals NHS Trust, United Kingdom*

Therapeutic potency ratings of topical corticosteroids are routinely determined indirectly by use of the vasoconstrictor assay. The aim of this study was to develop a human assay for testing the therapeutic potency of topical corticosteroids by investigating their effect directly on experimentally induced allergic contact dermatitis. The experimental contact allergen, diphenylcyclopropenone, was selected to induce controlled allergic contact dermatitis in healthy volunteers. In a double blind design the inhibitory effect on elicitation skin reactions of hydrocortisone, betamethasone-17-valerate (Betnovate) and clobetasol propionate (Dermovate) was scored visually and quantified objectively by skin ultrasound measurements. The assay detected a significant difference in therapeutic potency for Dermovate and Betnovate relative to Hydrocortisone and positive control. However, it could not differentiate between Dermovate and Betnovate.

S02-3

ALL YOU WANTED TO KNOW ABOUT PATCH TESTING, BUT DIDN'T DARE TO ASK

Bruze, Magnus *

Department of Occupational and Environmental Dermatology, Skåne University Hospital, Lund University, Malmö, Sweden

To arrive at a diagnosis of allergic contact dermatitis is a 3-step procedure. The first step is establishing of contact allergy which can be done by *in vivo* or *in vitro* methods. However, in vitro methods are only available for a few contact sensitizers so we have to rely on *in vivo* methods which in practice means patch testing. The patch test result depends on immunological factors and non-immunological factors. The latter ones will mainly be discussed in the lecture. Examples of such factors are dose of sensitizer, application time, occlusion time and reading days.

S03-1

THE PATHOGENESIS OF HIDRADENITIS SUPPURATIVA

*Grimstad, Øystein**

Universitetssykehuset Nord-Norge, Norway

The pathogenesis of hidradenitis suppurativa (HS) is complex and not fully elaborated. Recent research has given us more insight into the mechanisms involved in the disease. The primary defect in HS pathophysiology takes place within the hair follicle. Follicular occlusion, followed by follicular rupture, and a foreign body-type immune response are central events in the development of clinical HS. Genetic and environmental factors, such as cigarette smoking, adiposity and microbial colonization, all contribute to the HS phenotype. A summary of reigning pathophysiologic considerations in HS will be presented.

S03-2

PREVALENCE AND COMORBIDITIES OF HIDRADENITIS SUPPURATIVA

*Jemec, Gregor B.E.**

Roskilde University Hospital, Denmark

Hidradenitis suppurativa (HS) represents an orphan disease, that has only recently returned to dermatology. It is therefore attracting increasing academic interest.

Previously described as a very rare disease, recent studies indicate that this may partially be due to a suboptimal attention to the diagnosis. A significant delay in diagnosis exists globally, suggesting a low awareness of the diagnosis; and prevalence studies appear strongly related to the methodology used. Therefore registry studies generally conclude that HS is a rare disease, whilst self-reported data and cohorts conclude that HS is a comparatively common disease, with prevalence rates of 1–2% of the general population.

Evidence is accumulating to describe the often extensive co-morbidities of HS, adding observations to the hypothesis of inflammation as a common pathogenic pathway in a number of major diseases. In addition to well-recognised co-morbidities such as obesity and cardiovascular disease, other more exotic co-morbidities appear to characterise HS patients and add to their overall morbidity. Recent registry studies from Denmark have found HS patients to have a significantly increased risk of cardiovascular morbidity all-cause mortality. The risk appeared to be higher than that of patients with severe psoriasis.

S03-3

TREATMENT OF HIDRADENITIS SUPPURATIVA

*Sartorius, Karin**

Södersjukhuset, Sweden

Hidradenitis suppurativa (HS) has, by its chronic course with recurrent inflammation, suppuration and pain a high negative impact on the patient´s quality of life. Treatment strategies include medical and surgical therapy, as well as adjuvant measures and life style advices. In this part of the HS session different therapeutic options will be discussed, with focus on medical treatment.

S03-4

SURGICAL MANAGEMENT OF HIDRADENITIS SUPPURATIVA

*Ingvarsson, Gisli**

University Hospital of North Norway, Norway

Hidradenitis suppurativa (HS) surgical treatments options: Incisions, surgical resections with or without skin transplantations, modern moderations of approaches as CO_2 laser and the office friendly De-roofing. CO_2 laser methods explained specially: The full thickness open wound technique recommended.

CO_2 laser experiences UNN: Short local history, status to day, status in Norway.

The ongoing surgical treatment initiative is one of the effective options currently available and generally well accepted by patients:

Conclusions: The active role of the central dermatological clinics in the treatment of HS is critical if the aim is to offer sustainable treatment options. Elective surgery is an integral part of that committment.

S04-1

INTERPROFESSIONAL TRAINING IN DERMATOLOGY

Wiegleb Edström, Desiree[1]; Friman, A.[2]; Edelbring, S.[3]*

[1]Karolinska University Hospital, Dept of Dermatology, Sweden; [2]Dept of Neurobiology, Karolinska institutet, Sweden; [3]Faculty of Medicine and Health Sciences at Linköping University, Sweden

Study objectives: Health systems have become more complex and costly with an increased demand on health workers. The education has not kept pace with this challenge. We need interprofessional education (IPE) to break down professional silos and enhance teamwork. The aim was to investigate nursing and medical students' attitudes and perceptions towards each other's future professions and interprofessional collaboration in wound care.

Methods and material: Third-year medical students and second-year nursing students took part in an interprofessional learning activity in wound care. They were divided in three mixed group passing through three stations; doppler assessment, compression therapy and a paper based case. The patient case with reflection session was first solved monoprofessional and thereafter further discussed in mixed groups. Directly after each IPE session, one group of medical students and one group of nursing students were interviewed in focus groups about their future professional roles and interprofessional collaboration. The interviews were recorded and transcribed. The material was re-read several times to familiarize with the data, which then underwent thematic analysis in relation to the research question.

Results: Both student groups stressed the importance of transparency and clear professional roles and emphasized the need to drop prestige generally. They argued that this would result in respect for each other's knowledge area and prevent misunderstandings, providing reasonable expectations of each other. Students believed IPE to be an instrument to further understand each other's roles.

Conclusions: Interprofessional learning activities are appreciated as a shortage in today's education and provide new insights into other professions' competencies and roles. These types of learning activities may increase future interprofessional collaboration and communication between nurses and physicians.

S04-2

HOW TO USE INTERNET IN TEACHING DERMATOLOGY

*Peltonen, Sirkku**

University of Turku and Turku University Hospital, Finland

We are nowadays teaching dermatology for diginative student generation. This provides numerous opportunities to utilize internet as a tool for teaching. In the Department of Dermatology, University of Turku we have used internet-based material for two applications: an exam and learning in Moodle workspace.

The evaluation is performed after a period of two lecture weeks containing all Dermatology lectures. The students have five working days to solve about ten patient cases in Moodle. This replaced a traditional paper exam which covered the first textbook chapters and was hold during the first days of the Dermatology course in early 2000's. The task in Moodle is called an exam because every student has to give correct answers to at least half of the questions. If fact, it would be better described as a learning task which stimulates the students to start active studying in case they have not already done so. Examples of the questions will be shown during my talk.

The second application uses so called flipped classroom or inverted learning method. The students are again given patient cases, but now grouped according to the appearance of skin lesions, for example: patchy scaling lesions, pustular lesions or vesicular lesions. The students are asked to study the cases at home, to search for possible diagnoses, differential diagnoses and suggest treatments. The cases are then discussed together with the teacher in groups of 7–8 students. The purpose of this group work is to deepen the knowledge of the skin disease the cases represent, to stimulate the students to learn from each other, and also by sharing experience they may already had with patients. After this, the group with teacher will be responsible for two patients who have skin diseases representing the same diagnoses which were just studied. In the student feedback, this session has repeatedly been named as the best learning experience the 5th year students have had during their medical school.

S04-3

OBJECTIVE, STRUCTURED CLINICAL EXAMS IN DERMATOLOGY FOR MEDICAL STUDENTS

*Gjersvik, Petter**

University of Oslo, Norway

Traditionally, exams in medical school have been conducted as clinical exams with real patients and/or by oral or written exams. Such evaluation methods provide low validity, covering only a small portion of the field, and low reliability in the grading, and requires a lot of time and resources.

In so-called objective structured clinical examination (OSCE) the students are given clinical tasks to be solved within a limited number of minutes, and in which a teacher evaluates the candidate based on a predefined, standardized scoring template. This refines the evaluation and reduces the scoring variation between different teachers. The tasks are presented consecutively at "stations" of 5–15 minutes duration, which all candidates must undergo in turn. Such skill stations can be combined with written stations that test theoretical knowledge. All students are given identical tasks, and the requirements to pass the exam can be defined better.

At the University of Oslo, all students in each class are tested in dermatology and venereology using OSCE exams and several stations. At one station, a professional actor acts as "patient" with instructions on what to say and behave, mimicking a clinical consultation. At another station, a short case history and a photograph of an exanthema or a skin lesion is given, requiring the students to describe the findings and discuss possible diagnoses and treatment options. Theoretical aspects are tested at other stations with short-answer questions and true/false statements with written answers. Around 100 students per term do the OSCE exam in one day with the use of only six teachers and two external evaluators. Our experiences with OSCE are good. Examples of exam tasks and scoring templates will be presented.

S04-4

WEB-BASED CONSULTATIONS AND COUNSELING FOR PARENTS OF CHILDREN WITH ATOPIC DERMATITIS

*Schopf, Thomas**

Telemed, Norway

E-health enables remote diagnosis and management of medical conditions. The main benefit is less travelling and better access to health care services. The Internet has dramatically changed the access to health information. Both patients and health care personnel can read about health-related issues on websites or interact with each other on discussion forums, social networks or web-based messaging services.The aim of this study was to investigate how web-based consultations for parents of children with atopic eczema affect health outcomes, self-management behaviour, health resource use and family costs, as well as to investigate the workload of the doctor. In a randomised controlled trial conducted at the University Hospital of North-Norway and the Hammerfest County Hospital patients in the intervention arm could send requests to a dermatologist via a secure web-based messaging service for

a period of 1 year. Thirty-eight percent of the participants in the intervention group used the web-based service. The majority of users would recommend the consultation service to other parents of children with atopic eczema. There were no significant differences in the outcomes between the intervention and control group. The SCORAD-index improved from pre- to post-intervention in both groups, but this was not significant. Except for hospital admissions, both groups had significantly fewer overall health care visits after the one-year intervention compared to baseline. For a sample of requests the workload for the physician was analysed. The time needed by the physician to read and answer a request was less than 5 min in the majority of cases.

S05-1

LONG-TERM RESULTS FROM PHOTODYNAMIC TREATMENT IN BASAL CELL CARCINOMA

*Christensen, Eidi**

St. Olavs University Hospital and NTNU, Norway

Many studies on topical PDT of BCC report results with a limited follow-up period after treatment although tumour recurrence can be observed late. From the literature it is known that only about two-thirds of recurrence appeared during the first three years after various types of treatment.

Several treatment alternatives can be used for BCC. Surgical methods remain the gold standard. Despite being less effective than excision surgery, minimally invasive methods are often chosen for the treatment of BCCs located in cosmetic-sensitive skin areas, and topical PDT has given superior aesthetic outcomes compared with surgery. Even so, high treatment efficacy is the primary goal of treatment. Long-term follow-up data on PDT in BCC is thus of great importance for a full evaluation of its effect and for comparison with other treatment methods.

An overview of studies with long-term results from PDT in BCC will be provided. Both randomized and nonrandomized studies are represented. Studies with at least five years results show cure rates from 64% to 88%. However, it is difficult to compare results from different studies because of lack of uniformity. Differences among the studies with regard to several factors such as design, inclusion criteria, preparation for treatment and treatment procedures are considered. PDT long-term efficacy for BCC appears comparable with results after use of other non-surgical treatment modalities.

S05-2

MOHS SURGERY – INDICATIONS, TECHNIQUE AND ALTERNATIVES

*Paoli, John**

Sahlgrenska University Hospital, Sweden

Mohs micrographic surgery (MMS) allows for complete margin control during surgery guaranteeing the lowest recurrence rates postoperatively. MMS also spares as much healthy tissue as possible, which provides the Mohs surgeon with endless possibilities when planning for the reconstruction of the surgical defect and increasing the probability of an excellent functional and cosmetic result. The basic principles involved in MMS and other micrographic surgery techniques will be reviewed and the advantages and disadvantages of these methods will be discussed. The limited use of MMS in Scandinavia will also be highlighted as an area in need of improvement in the Nordic countries. Focus will also be placed on the main indications of MMS and the technical requirements needed to carry out this type of surgery.

S05-3

LONG-TERM OUTCOME OF DAYLIGHT PHOTODYNAMIC THERAPY WITH 5-AMINOLAEVULINATE NANOEMULSION (BF-200 ALA) AND METHYL-5-AMINOLAEVULINATE (MAL) FOR AKS

Neittaanmäki-Perttu, Noora[1]; Grönroos, Mari[2]; Tani, Taneli[2]; Snellman, Erna[3]*

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Introduction and Objectives: In our previously published non-sponsored randomized double-blinded prospective trial, amino-5-laevulinate nanoemulsion (BF-200 ALA) showed a trend towards improved short-time efficacy compared to MAL in daylight-photodynamic therapy (DL-PDT) for AKs. This abstract reports the long-term 12-month clinical and histological outcome of the same trial.

Material and Methods: Thirteen patients with symmetrical actinic damage were randomized to receive DL-PDT with BF-200 ALA on one and with MAL on the other side of facial or scalp areas. Blinded assessment of efficacy was conducted clinically, histologically and immunohistochemically at 3 and 12 months.

Results: All 13 patients (177 grade I-III AKs) included in the initial 3-month analyses continued in the follow up to 12 months. At 12 months in per patient half-face analysis, 9 of the 13 (69%) fields treated with BF-200 ALA and 3 of 13 (23%) of the fields treated with MAL were completely cleared of AKs, p=0.07. The mean complete lesion clearance rate per patient (half-face) was 87% for BF-200 ALA and 62% for MAL (p=0.007). One patient who was clinically completely cleared refused histological sampling at 12 month visit. Thus, 12 patients were biopsied bilaterally after 12 months. The complete histological clearance rates were 6 of 12 (50%) for BF-200 ALA and 5 of 12 (41.6%) for MAL, p=0.417. At 12 months in the BF-200 ALA group the mean p53 expression remained decreased (45.4% of the baseline level), while p53 expression in the MAL group was increased back to the pre-treatment baseline level (96%), p=0.182.

Conclusions: Our results show, for the first time, the long term efficacy of DL-PDT. They suggest that in a long term follow-up BF-200 ALA may be more effective compared to MAL in the treatment of AKs with DL-PDT. Interestingly, p53 expression only minimally increased between 3 and 12 months after treatment in the BF-200 ALA group while in

S05-4

SKIN DYSPLASIA TREATED WITH FRACTIONAL LASER AND ANTI-CANCER DRUGS

*Haedersdal, Merete**

Bispebjerg University Hospital, Denmark

Fractional laser-assisted drug delivery represents an evolving technique to deliver topically applied drugs and perspectives are enormous due to excellent potentials for intensifying topical treatment regimens and for delivering systemic drugs to target skin diseases. The presentation will give up-to-date information on the current status of using ablative fractional lasers to facilitate the delivery of anti-cancer drugs through laser channels (1).

Data will be presented from basics to clinics, focusing on current clinical state of knowledge in derm oncology using photosensitizers, ingenol mebutate, 5-fluorouracil, and methotrexate. New data are available to support translating the concept of fractional laser-assisted delivery into clinical benefit for patients with dysplastic lesions. Safety issues will be covered as well as future perspectives. In summary, the lecture will provide laser derm surgeons information to take advantage of fractional laser procedures and topical drugs in combination

Ref: 1. Haedersdal M, Erlendsson AM, Paasch U, Anderson RR. Translational medicine in the field of ablative fractional laser (AFXL)-assisted drug delivery: A critical review from basics to current clinical status. JAAD, in press.

S05-5

VISMODEGIB TREATMENT OF ADVANCED AND METASTATIC BASAL CELL CARCINOMA

*Koskenmies, S.**

Helsinki University Hospital, Finland

Vismodegib (Erivedge®) is a first systemic drug approved for the treatment of basal cell carcinoma (BCC) and the first in the class of the hedgehog (hh) inhibitors. It was first approved in USA year 2012 for recurrent, locally advanced (laBCC) and metastatic basal cell carcinoma (mBCC). The role of hedgehog signaling pathway in the molecular pathogenesis of BCC is based on observation in 1996 that heritable mutations in patients with nevoid cell carcinoma syndrome (NBCCS or Gorlin Goltz syndrome), an autosomal dominant disorder with mutations in the human homolog of the 1 patched (PTCH) gene, characterized my multiple BCCs, keratocysts of the jaw, palmar/plantar pits, spine and rib anomalies.

Normally, the hedgehog binding to PTCH1 relieves inhibition of so called SMO activation by PTCH1. In the absence of PTCH1, because of loss-of-PTCH1 mutations, SMO signaling occurs constitutively, potentially leading to several cancers including BCC. The etiology of BCC in non–Gorlin syndrome patients in almost all cases is also linked to upregulated signaling of the Hh pathway. Therefore, suppression of the Hh pathway with an SMO antagonist such as vismodegib would theoretically prevent further basal cell proliferation caused by Hh pathway stimulation.

Erivedge® is administered orally at 150 mg daily until disease progression. According to literature an overall response rate (ORR) of 30.3% [95% confidence interval (CI): 15.6–48.2] in 33 patients with mBCC and an ORR of 42.9% (95% CI: 30.5–56.0) in 63 patients with laBCC has been reported; median response durations were 7.6 months and 7.6 months for patients with mBCC and laBCC, respectively. The most common adverse reactions are muscle spasms, alopecia and dysgeusia/ageusia, which often leads to decreased appetite and weight loss. Also nausea, diarrhea, constipation, arthralgias and headache have been described. Magnesium product orally at 300 mg daily are recommended to reduce the muscle spasm.

S06-1

ON THE SPOT-DIAGNOSIS OF SEXUALLY TRANSMITTED INFECTIONS

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Early and accurate diagnosis and treatment of STIs is important in order to reduce the time of infectiveness, to reduce risk of transmission, reduce risk of complications, to secure treatment and to save time for the patient and for the department.

There is a great need for simple, cheap diagnostic tests for STIs that can be performed at the point of care, enabling treatment to be given immediately. In an online survey, STI-professionals preferred C. trachomatis as the top priority for a Point Of Care Tests (POCT) with sensitivity over 90%, low cost, and a completion time ideally less than 5 minutes.

There are many POCTs for Chlamydia and Gonorrhea on the market, but they have all disappointing low sensitivity and specificity. However, multiplex nucleid acid amplification tests (NAATs) assays are now being marketed, making it possible to diagnose many species from one sample within a short time. Such multiplex NAATS have many drawbacks and pitfalls, which will be discussed.

The fastest and cheapest test for diagnosing urethritis in males, gonococcal as well as non-gonococcal, is a methylene blue stained urethral smear. Gonococci have a typical morphology in a methylene blue stained smear, and the leucocytes are easier to identify than in a Gram stained smear. The smear can be stained and microscoped in the examination room by the physician. The methylene blue staining takes 30 second and microscoping perhaps 1–2 min.

But it is important which device is used for taking the smear. Using a cotton swab or a plastic loop only 20–30% of those infected with C. trachomatis or M. genitalium will have a smear indicating urethritis. Using a metal spatula the sensitivity for M. genitalium will be near 100% and for C. trachomatis 90–95%, even in asymptomatic males.

In women, urethritis should be used as one of the diagnostic criteria for a lower and upper genital tract infection, together with wet smear, clinical and microscopically cervicitis, and pelvic tenderness.

S06-2

CAN WE PREVENT PENILE AND EXTRA-GENITAL CANCER BY INCLUDING BOYS IN THE HPV VACCINATION PROGRAM?

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Since a few years, the quadrivalent HPV vaccine is included in the vaccination program in many countries, and shows a high efficacy for prevention of infections with HPV 6, 11, 16 and 18. Usually, only girls are vaccinated due to the link between HPV and female genital cancer, of which cervical cancer is the most common. There are many arguments for inclusion of boys in the vaccination programs.

Both sexes are afflicted by genital warts, a condition that might be long lasting, causing pain, itching and psychosexual problems. A decrease of genital warts has been reported in heterosexual young men in Australia due to herd immunity when their female partners have been vaccinated, but this decrease has not been seen in men who have sex with men. Besides genital warts, also penile cancer could be prevented by vaccination. Penile cancer is a rare cancer form that might be HPV associated, mainly seen among older men. In contrast, penile intraepithelial neoplasia is usually caused by HPV, and is common among younger men. Oral and anal cancer affect both men and women, and are often HPV associated; cancer forms that have increased in recent years. Men who have sex with men is the main risk group for anal intraepithelial neoplasia and anal cancer, dysplastic lesions often caused by HPV 16 and could be preventable by HPV vaccine.

As more data about HPV in men are coming, hopefully, men in Europe also will be included in the HPV vaccination program in the near future. In that way, prevention of HPV related disease in the whole population would be more efficient.

S06-3

HIGH-RESOLUTION ANOSCOPY AND ANAL INTRAEPITHELIAL NEOPLASIA – STARTING FROM SCRATCH IN THE NORDIC COUNTRIES

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Anal cancer is rare, but has been increasing in many countries over the last decades. Persons, who are immun compromised due to HIV-infection and organ transplantation and also women with a prior genital cancer are especially at risk. High resolution anoscopy (HRA) is a technique used to screen for anal intra-epithelial neoplasia (AIN) of which high-grade anal intra-epithelial neoplasia (HGAIN;AIN 2/3) are considered precursor lesions for anal cancer. HRA is a challenging procedure; the anoscopist needs extensive training and it requires a long learning curve. The technique shares many similarities to colposcopy, but where the transformation zone in the anal canal can be more difficult to visualize due to hemorrhoids, folds and stool. Treatment of HGAIN shares many similarities with the treatment possibilities for ano-genital warts, e.g. topical and ablasive treatments. The present talk will focus on how to get started performing HRA; and shortly describe a previous and an actual study set up using HRA at the Department of Dermato-venereology at Bispebjerg Hospital, Copenhagen.

S06-4

GENITAL HERPES VIRUS INFECTIONS – AN UPDATE

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Genital herpes can be caused by herpes simplex virus type 1 (HSV-1) or HSV-2. Most cases of recurrent genital herpes are caused by HSV-2 and in 2012 HSV-2 was estimated to infect 417 million people worldwide. However, HSV-1 as a cause of genital herpes is becoming more common since many adolescents have not been infected with HSV-1 as children and therefore lack HSV-1 antibodies at their sexual debut.

HSV may cause frequent, painful genital ulcers, but in many persons the infection is subclinical. Regardless, the virus is frequently shed from the genital area in the absence of clinical disease and most infections are transmitted by persons unaware of their HSV-status.

Genital herpes has a significant impact on sexual health and it can also cause serious complications. The complications include encephalitis, meningitis, an increased risk of acquiring HIV infection and neonatal HSV-infection. The incidence of neonatal herpes seems to increase and even if the mortality has fallen, it still remains high.

Systemic antiviral treatment can reduce the symptoms of genital herpes in primary and recurrent episodes or when used as daily suppressive therapy. However, these drugs cannot eradicate latent virus or affect the frequency or severity of recurrences after it is discontinued. Regarding vaccines, several candidate vaccines have been promising in animal models, but so far both prophylactic and therapeutic vaccines have been proven ineffective in human trials.

S06-5

MYCOPLASMA GENITALIUM – WHERE DO WE GO FROM HERE?

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Mycoplasma genitalium is, together with Chlamydia trachomatis, a known cause of non-gonococcal urethritis (NGU) in both men and women, and cervicitis in women. It can present itself in many other genital clinical settings, including pelvic inflammatory disease, but is in many cases asymptomatic. An emerging problem is increasing resistance towards the macrolide azithromycin, the standard first-choice treatment of this bacterium.

In this presentation both finished and ongoing studies at St.Olavs University Hospital regarding Mycoplasma genitalium will be briefly presented. Preliminary studies show that resistant strains are more prevalent than anticipated. These resistant strains can be detected early in order to choose correct treatment, but second-line treatment with moxifloxacin can be challenging.

S07-1

SOMATIC MUTATIONS OF GNAQ ARE ENRICHED IN ENDOTHELIAL CELLS IN STURGE-WEBER SYNDROME

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Sturge-Weber syndrome (SWS) is a rare neurocutaneous disorder of dilated post-capillary venules in skin and leptomeninges. A long-standing theory that it is caused by a somatic mutation was confirmed in 2013 by a study showing mutations of GNAQ in a large majority of patients. Our objective was to study this mutation in a Norwegian cohort and examine whether mutations were enriched in endothelial cells

Six patients with SWS were recruited and 4 mm punch biopsies were obtained from affected and unaffected skin. Biopsies were either treated to obtain separate keratinocyte, fibroblast and endothelial cell cultures or were formalin-fixed and paraffin-embedded (FFPE) for laser capture microscopy (LCM). DNA was isolated from whole dermis and/or cell cultures and from LCM samples and analysed with MiSeq.

In 5 of the 6 patients the known GNAQ mutation (c.548G>A) was detected in either whole dermis or endothelial cell cultures. All samples from unaffected skin and affected keratinocyte and fibroblast cultures were negative. The mutation frequencies in dermal and endothelial cell samples were 4.7%–14.4% except in one endothelial culture that showed low but detectable mutation rate (0.2%). This was the only endothelial cell culture to be successfully grown for several passages suggesting a negative selection of mutated cells *in vitro*. To further corroborate endothelial enrichment of the mutation LCM was performed on FFPE samples from two patients. DNA from laser-dissected vascular structures in affected lesions showed 19.9% and 29.8% of mutated alleles (with corresponding 5.7% and 7.0% mutation rates in whole dermis) with low or undetectable mutation rate in laser-dissected epidermis.

Our study confirms GNAQ:c.548G>A as a the most frequent somatic mutation in Sturge-Weber syndrome. With the observed enrichment in endothelial cells it is likely that

abnormal G-protein signaling due somatic mutations in endothelial angioblasts is causative for development of vascular malformations.

S07-2

VALIDATION OF DYNAMIC OPTICAL COHERENCE TOMOGRAPHY FOR IN VIVO MICROCIRCULATION IMAGING OF THE SKIN

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Study objectives: Dynamic OCT is a new non-invasive imaging tool that provides information regarding the microvasculature in the skin by combining conventional OCT images with flow data. The objective of this study is to investigate the new dynamic OCT technique for non-invasive imaging of the vascular networks in skin as well as to validate the method by comparing the quantitative results against already accepted blood flow measuring tools.

Methods and material: Thirty-five healthy subjects were recruited for the study, consisting of three experiments. The study was carried out in three European clinical dermatology centres. The experiments were set up to examine the vascular blood perfusion during different induced physiologic changes in the blood flow. The experiments included positional changes of the limbs, application of vasoactive butoxyethyl nicotinate ointment and induced vascular occlusion. In order to validate the dynamic OCT images against existing techniques for blood flow measuring we performed consecutive dynamic OCT, chromametry and laser speckle contrast imager (LSCI) measurements on identical skin sites in all of the experiments.

Results: There was a positive correlation between the dynamic OCT measurements and the LACI flux measurements, which was statistically significant (rs=0.494; 95% CI [0.357, 0.615]; $p<0.001$), and also the chromaticity a* measurements were positively correlated with the dynamic OCT measurements (r=0.48; 95% CI [0.406, 0.55]. Morphologically, dynamic OCT was able to reliably image and identify changes in the vessel network appearance and perfusion consistent with the induced physiological changes in all three experiments.

Conclusion: Dynamic OCT can non-invasively visualize blood vessels to a skin depth of around 500 mm, usually reaching mid dermis. Dynamic OCT may potentially aid the exploration of pathological skin changes such as vascular diseases and skin tumours for exploring the pathophysiology and the effect of interventions.

S07-3

APPLICATION OF PATIENT-DERIVED MELANOMA XENOGRAFTS FOR DRUG DEVELOPMENT

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Progress in targeted and immunotherapies has transformed the care of melanoma patients. However, most patients die of their disease, often due to brain metastasis for which current treatment modalities have limited effect. Our group has previously reported on a reproducible and predictive animal model of melanoma metastasis. Here, we utilize this model to investigate the global gene alterations following the establishment of brain metastasis. Mice were injected intracardially and followed for six weeks with whole-body BLI and brain MRI. Tumor-bearing brains, adrenals, ovaries, and femurs were harvested before three tumor samples from each organ were flow-sorted and subjected to RNA sequencing. We were able to define a specific brain metastasis gene signature, and queried the Connectivity Map database for candidate drugs, i.e. drugs that induce an opposite gene expression profile. We found the cholesterol analogue beta-sitosterol to effectively inhibit brain metastases and improve overall survival. Mechanistically, Beta-sitosterol suppressed mitochondrial respiration through Complex I inhibition, impairing metabolic adaptation preceding drug resistance for current targeted therapies. This novel mechanistic synergy may open new avenues of systemic therapy against metastatic melanoma. Finally, we have established a clonal tracking system that can monitor drug resistance, the metastatic process and clonal evolution of melanomas at a single cell resolution *in vivo*.

S07-4

MERKEL CELL CARCINOMA INCIDENCE IS INCREASING IN SWEDEN

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Background: MCC is a rare aggressive neuroectodermal skin cancer with a high recurrence rate and a high mortality rate. Risk factors for MCC are reported to include high age, UV-exposure, Caucasian skin type and immunosuppression. The incidence is reported to be increasing. The purpose of this study was to describe a Swedish cohort and calculate incidence.

Methods: The study design is a retrospective cohort study of population based data for MCC collected by the Swedish Can-

cer Registry (SCR) to determine the incidence of MCC in Sweden and the clinical characteristics of these tumours including demographics, TNM-classification, body part distribution and overall survival after diagnosis. Deidentified data was collected from 1993 to 2012 using both Systematized nomenclature of medicine (SNOMED) and International Classification of Diseases for Oncology (ICD) thus ensuring both the clinicians and the pathologist classifications of the MCCs. The study has gotten approval from the Swedish Ethical Review Board.

Results: A total of 606 cases of MCC were identified. The overall incidence for men and women per 100,000 persons age-standardised to the world population increased from 0.11 to 0.19 (p<0.01) during the study period, an increase of 73%. The age adjusted incidence was higher in men. The majority of the tumours (91%) had no known lymphatic spread and only a few patients had confirmed distant metastases (3%) when diagnosed. The most common tumour site was the head and neck area (52.0%). The relative 5-year survival was 67.3% which was lower than the expected national age-, period-, and sex-specific mortality rates.

Conclusions: MCC is a rare disease in Sweden, but the incidence is increasing. Incidence rates are higher than those in other Nordic countries. This study support the finding that high age, male sex and UV-exposure are risk factors for MCCs. Interventions are required to increase awareness of MCC among clinicians and the public.

S07-5

INCIDENCE, MORTALITY AND CANCER RISK OF NEUROFIBROMATOSIS TYPE 1

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This study was designed to determine the incidence, mortality and cancer risk in neurofibromatosis type 1 (NF1) by cancer type, age and sex with unprecedented accuracy achieved by combining two total-population-based registers.

A population-based series of NF1 patients (1,404 subjects, 19,076 person-years) was linked to incident cancers from the Finnish Cancer Registry and deaths between 1987 and 2012. Standardized incidence ratios (SIR) and standardized mortality ratios (SMR) were calculated for selected cancer types. Survival of the cancer patients with and without NF1were compared.

The results showed that the incidence of NF1 was about 1/2,000 which is clearly higher than the generally referred number 1/3,000. The age at death was 52.3 years in men and 51.8 years in women. The traditionally NF1 associated malignant peripheral nerve sheath tumors and brain tumors displayed SIRs of 2.056 (95%CI 1.561–2.658), and 37.5 (95%CI 30.2–46.0); and SMRs of 2.301 (95%CI 1.652–3.122) and 30.2 (95%CI 19.1–45.2), respectively. We found beyond doubt an increased risk for breast cancer. In particular, SIR was 11.1 (95% CI 5.56–19.5) for breast cancer in NF1 women under 40 years. The overall SMR for breast cancer was 5.20 (95%CI 2.38–9.88). Furthermore, our results suggest that GIST, pheochromocytoma, thyroid cancer, and malignant fibrous histiocytoma are NF1-related malignancies with elevated incidence compared to population.

Particularly high SIRs were observed for NF1 patients under 15 years: 91.2 (95%CI 61.0–130) for females, and 47.2 (95%CI 29.4–70.9) for males. An estimated lifetime cancer risk in NF1 was 59.6%. In NF1, The 5-year survival of cancer patients with NF1 excluding nervous tissue cancers was worse than that of comparable cancer patients without NF1.

To conclude, NF1 syndrome is associated with a high risk of developing a variety of cancers and dying from them. The results show that NF1 is a life threatening disease and the patients require lifelong follow-up.

S07-6

IS CLINICAL SUBTYPING OF HIDRADENITIS SUPPURATIVA BY TOPOGRAPHY AFFECTED POSSIBLE?

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Study objectives: Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease, characterized by repeated outbreaks of painful inflamed lesions in the apocrine gland-bearing regions of the skin. The typical HS patient is a young woman with axillary and groin involvement, but the spectrum of the disease presentations is broad. No international acknowledged sub-classification of the disease exists to date. In this study we have analysed prospective data on a cohort of HS patients regarding topographic distribution of lesions stratified for sex. We will furthermore perform a latent class analysis to identify possible subtypes.

Methods and material: A questionnaire was sent to 609 HS patients with a clinically confirmed diagnosis. The questionnaire included the questions "how many flares have you had within the last six month in eight different locations. Patients could answer: none, <3, 3–10 and >10. The questionnaire also included sex and gender.

Results: 384 patients had answered the questions about flares satisfactory, 84 female and 300 male. We found no statistical

difference between the sexes on the frequencies of flares in the axillae, buttocks or pubis region. Flares in the groin, genital and mammary region were significantly more common in women than in men (groin: >10 flares: male(m): 14.3% female(f): 30.0%, $p< 0.001$) (genital: >10 flares: m: 5%, f:12%, $p<0.0001$) and (mammary: >10 flares: m:2%, f:7%, $p=0.04$). Perianal flares and flares in other locations were significantly more common in men than in women (perianal: >10 flares: m:8%, f:5%, $p=0.04$) and (other: >10 flares: m:9,5% f:4%, $p=0.02$).

Conclusion: Our observations support the notion that HS may be further classified, as the findings support the clinical impression that the front of the body is most often affected in female patients and the back of the body is most often affected in male patients. The findings support the development of further sub-classification of HS.

S08-1

EFFECT OF WATER HARDNESS AND SEASON OF BIRTH ON ATOPIC DERMATITIS IN CHILDREN: A STUDY WITHIN THE DANISH NATIONAL BIRTH COHORT

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Background: Previous studies have proposed an increased prevalence of atopic dermatitis in regions with hard domestic water when compared to regions with soft water, as well as in children born in the fall and winter.

Objective: To evaluate a possible association between atopic dermatitis and, respectively, domestic water hardness and season of birth in a large cohort of children. Moreover, we evaluated whether the presence of filaggrin gene mutations affected this relationship.

Methods: A total of 52,950 children from the Danish National Birth Cohort were analyzed. Information on outcome and confounders were obtained from questionnaires. Water hardness data was provided by the Geological Survey of Denmark and Greenland and linked to the children's municipality code. A subpopulation of 897 children was genotyped for the four most common filaggrin gene mutations and analyzed.

Results: Fully adjusted analyses showed a higher relative risk of atopic dermatitis in children born in the fall (aRR 1.24; 95% CI 1.17–1.31) and winter (aRR 1.18; 95% CI 1.12–1.26) than in spring (reference group). Fully adjusted trend tests showed a 4% significantly increased risk of atopic dermatitis (aRR 1.04; 95% 1.02–1.07) for each increasing water hardness category and 1% (aRR 1.01; 95% CI 1.00–1.01) for each increasing degree of water hardness (range °dH 6.60–35.90). No effect of filaggrin gene mutations was found.

Conclusion: We showed that season of birth and domestic water hardness affected the risk of atopic dermatitis within the first 18 months of life. Thus, children born in the fall and winter had a significantly higher risk of atopic dermatitis, whereas an increase in domestic water hardness led to a small, but significant increase in risk of atopic dermatitis. The presence of filaggrin mutationsdid not affect these results.

S08-2

QUALITY OF LIFE AND DISEASE SEVERITY IN PATIENTS WITH ATOPIC DERMATITIS

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Background: Atopic dermatitis (AD) affects quality of life (QoL) negatively in patients and their families. We examined the relationship between disease severity and QoL in patients with AD.

Methods: Consecutive, newly referred outpatients with AD, four years of age or older, were assessed from January 2012 onwards by means of the Dermatology Life Quality Index (DLQI, range 0–30), the Scoring of AD (SCORAD) disease severity score (range 0–103), filaggrin gene (FLG) mutation status and para-clinical tests related to allergy.

Results: 250 patients with a mean age of 26.0 years were identified with complete data on DLQI; 148 (59.2%) females and 102 (40.8%) males. Of these 45.6% had asthma, 46.8% had hay fever, 22.7% had a loss-of-function mutation in FLG, and 61.9% had one or more inhalant allergic sensitizations. The correlation between SCORAD and DLQI was 0.42 ($p<0.001$). After multivariate adjustment there was an increasing mean DLQI score with increasing disease severity measured by SCORAD (DLQI in mild =5.30, moderate =8.59, and severe =11.94 AD), p-value for difference between groups <0.001; a higher mean DLQI among females than males (9.73 vs. 8.34), $p=0.028$; and among patients reporting facial eczema (9.88 vs. 6.24), $p=0.012$. No statistically significant influence on DLQI was found for hand or foot eczema, age, blood eosinophil count, allergic sensitization, asthma, hay fever, FLG mutation status and smoking. FLG null mutation status was not significantly associated with SCORAD.

Conclusion: AD impacts negatively on the QoL, proportionally to the severity of the disease. Furthermore, female sex and facial eczema are associated with low QoL. Positive FLG null mutation status is not associated with QoL or disease severity.

S08-3

VALIDITY OF SELF-REPORTED PSORIASIS IN A GENERAL POPULATION: THE HUNT STUDY, NORWAY

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Background: A high prevalence of psoriasis has been reported in Norway over the last decades and validation studies are required.

Objectives: We aimed to validate self-reported psoriasis in a large population-based study in Norway, using clinical skin examination performed by dermatologists as the gold standard, and also to estimate the validation based prevalence of psoriasis in a general Norwegian population.

Methods: The validation study was conducted using random samples of subjects with and without self-reported psoriasis from the third survey of the Norwegian Nord-Trøndelag Health Study (HUNT3). To obtain estimates representative for the total HUNT3 population, probability weights were applied in the statistical analyses to account for differences in sampling probability.

Results: In this population-based validation study, 78% (95% confidence interval (CI) 69–85%) of the subjects who self-reported psoriasis had the diagnosis confirmed when clinical skin examination was performed by dermatologists. The prevalence of psoriasis increased from 5.8% when using the self-reported information, to 8.0% (95% CI 6.4–9.9%) when taking the diagnostic test result of the validation study into account. Thus, the present study indicates that self-report may underestimate the prevalence of psoriasis in a general population, and this is largely due to a considerable number of people with undiagnosed scalp psoriasis.

Conclusions: This validation study indicates that the psoriasis question may be a valid data resource for future psoriasis studies. Furthermore, the present study suggests that almost one out of twelve in the adult Norwegian population may have psoriasis.

S08-4

CLINICAL FEATURES, HISTORY OF DISEASES AND PHARMACOLOGICAL THERAPIES OF BULLOUS PEMPHIGOID IN A FINNISH COHORT

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Study objectives: To identify comorbidities, medications and clinical features associated with bullous pemphigoid (BP) and assess the efficacy of treatment in a Finnish cohort. To our knowledge, this was the first study on BP in Northern Europe.

Methods and material: We retrospectively analyzed the medical data of 70 BP patients referred to Helsinki University Central Hospital during 2012 and 2013. Positive findings in direct immunofluorescence were criteria to be included in the analysis. 69 patients received treatment.

Results: 36 patients were male (51.4%). The mean age at diagnosis was 77.1 ±10.3 (45–92) years. Average duration from symptoms to diagnosis was 7 months. Most common disorders were hypertension (44.3%), diabetes type 2 (34.3%) and ischemic heart disease (25.7%). 32 patients were diagnosed with a neurological disorder (45.7%), of which dementia (20%) and stroke (17.1%) were most frequent. Also, 9 patients had memory loss but no diagnosis of dementia. Importantly, 24% had a past of a previous or concomitant malignancy. Psychiatric conditions were present in 14,3%. Most used drugs were statins (47.1%), beta-blockers (45.7%), diuretics (35.7%) and ASA (34.3%).

95.7% had a generalized disease. Clinical manifestations included bullae (94.3%), itch (82.8%), eczema-like lesions (54.3%), mucosal involvement (14.3%) and urticaria-like lesions (7.1%). Treatment consisted or either both oral and topical (53.6%), only topical (33.3%), only oral (4.3%) and both oral and topical corticosteroids in addition to immunosuppressants (8.7%). 4 were treated with methotrexate and 2 with azathioprine. Clinical efficacy was noted in 82.6% of all cases. 62.3% needed a second line of treatment.

Conclusion: The prevalence of neurological disease in the material was significant. Many patients had multiple systemic comorbidities, of which hypertension, DT2 and malignancies were most common. Treatment was mostly successful but often required a second line of treatment.

S08-5

A CASE REPORT. PULSED INTRAVENOUS IMMUNOGLOBULIN IN THE TREATMENT OF LIVEDOID VASCULOPATHY

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Livedoid vasculopathy is a thrombotic vasculopathy of the skin of unknown origin. The typical presentation of livedoid vasculopathy includes chronic, recurrent painful ulcers, satellite scar-like atrophy and telangiectasia involving especially the lower extremities. The patients have often long lasting symptoms and the diagnose can be difficult to set. No treatment has been validated, but some case reports have demonstrated successful use of intravenous immunoglobulins (IVIg) in Livedoid vasculopathy.

At the Dept. of Dermatology OUS Rikshospitalet, we have treated two patients with refractory LV with 2 g/kg pulsed IVIg therapy every month for 6 months with very rapid and excellent effect.Both patients had before this tried several treatments with no long lasting effects, and had experienced significantly side effects of earlier treatment.After the first cycle of IVIg both patients reported of effect on symptoms. There were rapid effect on pain and QOL increased, and after 3 cycles most of the open ulcers had healed in both patients. One patient had relapse 3 months after the treatment was ended and have now started a new cycle of treatment. The other patient ended the treatment in November 2015 and has no new symptoms. The treatment was tolerated very well and no significantly side effects have been reported.

We suggest that treatment with IVIg should be offered to patients who have refractory livedoid vasculitis. IVIg should be evaluated in clinically studies compared with other treatments available.

S08-6

INFANT WITH HARLEQUIN ICHTHYOSIS DEVELOPING OSTEOPENIA AND MULTIPLE FRACTURES DURING ACITRETIN THERAPY

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Harlequin ichthyosis is the most severe form of autosomal recesssive congenital ichthyosis with high reported mortality rates. Advanced intensive care unit management is crucial for survival whereas early introduction of oral retinoid therapy has been implied to be of benefit to survival (1).

We report a 36-week-old newborn with Harlequin ichthyosis born at an outside hospital arriving at Oslo University Hospital Rikshospitalet at day 2. He developed a critical disease course including severe septicaemia due to several microbes and demand for long-term respiratory and cardiovascular support. Escharotomy was performed twice due to development of compartment syndrome of his hands and feet. Acitretin was prescribed from day 3. At day 44 X-ray revealed severe osteopenia and fractures in both femoral bones and tibia. The boy survived and was transferred to hos local hospital at day 52.

This is to our knowledge the first Harlequin ichthyosis child born in Norway for the last 3–4 decades. During the case presentation we will discuss possible explanations for the occurrence of the skeletal findings.

Ref: 1. Rajpopat S et al. Harlequin ichthyosis: a review of clinical and molecular findings in 45 cases. Arch Dermatol 2011.

S08-7

AWARE: A NON-INTERVENTIONAL SCANDINAVIAN STUDY TO EVALUATE THE BURDEN OF DISEASE IN PATIENTS WITH CHRONIC URTICARIA: A BASELINE PRESENTATION

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Aim: To examine the use of clinical resources, the burden of disease, comorbidities and treatment options in patients with chronic urticaria (CU) refractory to H1-antihistamines.

Methods: AWARE is a non-interventional Scandinavian multicenter study. Baseline data from 7 centers including 158 patients with CU; 28 from Sweden, 50 from Norway and 80 from Denmark are presented. DLQI (Dermatology Quality of Life Index), UCT (Urticaria Control Test), UAS7 (Urticaria Activity Score over 7 days), WPAI-CU (Work Productivity and Activity Impairment Questionnaire-Chronic Urticaria) and for Denmark also CU-QoL (Chronic Urticaria Quality of Life Questionnaire) and CindU Score (chronic inducible urticaria score) are used.

Results: 97 patients (61.4%) had chronic spontaneous urticaria (CSU), 29 (18.4%) had chronic inducible urticaria (CindU) and 32 (20.3%) had a combination of CSU and CindU. 110 (69.6%) of the CU patients were female. The mean age was 40.9 (±13.5) years. Mean time since diagnosis was 6.4 (±8.5) years. 55 patients (34.8%) with CU also had angioedema. 50 patients (31.6%) were treated only with nsH1-antihistamines, 26 patients (16.5%) were on systemic therapy (excl. omalizumab), 60 patients (43%) were treated with omalizumab alone or in addition to systemic therapy and/or antihistamines. 16 (10.1%) patients used other combinations. The mean DLQI score was 7.7(±6.5), the mean UAS7 score was 15.6 (±11.5) and the mean UCT score was 8.3(±4.8). Patients had a total work and productivity impairment of 23.2% as measured by WPAI-CU score, and had visited a GP 8.3 (±14.0) times and an emergency room 2.5 (±2.6) times, in average, during the last 6 months.

Conclusion: Marked impairment of quality of life and work productivity reflects the burden of CU. Patients with CU are frequent users of health care resources such as visits to GPs and specialists and have a high rate of unscheduled emergency visits and hospitalizations. This study shows a substantial unmet medical need among patients with CU.

S09-1

PREVENTION OF ATOPIC ECZEMA – IS IT POSSIBLE?

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Can Atopic Dermatitis be prevented? There are studies showing primary prevention of atopic dermatitis (AD) by using emoillients. Simpson et al showed enhancement of the skin barrier when given emoillments to high-risk children before the age of 3 weeks and up until 6 months. They could show a significant reduction of the cumulative risk of AD development at 6 months with 50 % (Simpson et al. JACI 2014; 134: 818–823). Horimukai K et al. showed that application of moisturizer to high-risk neonates prevented development of AD with a reduction of the cumulative risk with 32% (Horimuku et al. JACI 2014; 134: 824–830).

But which babies should get this prevention and when? Are these interventions only postponing AD development? Kelleher et al. showed that a high transepidermal waterloss at 2 days and 2 months is strongly associated with an increased prevalence of AD at 12 months. This was assessed in an unselected asymptomatic birth cohort (Keheller et al. JACI 2015 Apr; 135(4): 930–935).

So abnormalities in the skin barrier seem to predate symptomatic AD. Are these the babies that should get emoillments? Does it matter which moisturizers that are used?

There is also an increasing interest in probiotics. Is it possible to prevent AD in high-risk newborns by giving them and/or the mothers probiotics as supplementation? This will be discussed.

The flaky tail mouse is model for AD with a spontaneuos homozygous mutation in the FLG gene. They show an IV phenotype, eczema changes, high IgE levels and a Th17 dominated skin inflammation. Rekombinant FLG monomer applied topically to the flaky tail mice has been shown to restore the phenotype (Stout TE et al. JID 2013). Will this be a way to prevent AD in the future?

S09-2

FILAGGRIN NULL MUTATIONS DO NOT PREDICT ATOPIC DERMATITIS TREATMENT RESPONSE IN THE FINNISH FOUNDER POPULATION

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Since the mid-20th century, the lifetime prevalence of atopic dermatitis (AD, atopic eczema) has increased up to 30% in several Nordic Countries. The epidermal protein filaggrin plays a key role in the skin barrier with reported 49 null mutations in the encoding FLG gene. FLG mutation carriers have an increased risk of AD, allergic sensitization, and asthma in the presence of AD.

We assessed the effect of four prevalent European FLG-null mutations, two Finnish enriched FLG-null mutations, the 12-repeat allele, and a set of 50 potential liability variants within other epidermal barrier genes (CLDN1, CLDN4, CLDN20, CLDN23, OCLN, IVL, FLG2, LOR, JAM-1, TJP1) on the risk of AD in a sample of 501 Finnish AD patients and 1,710 controls. Association was tested with treatment response, clinical features, risk of other atopic diseases (asthma, rhinitis, conjunctivitis), and age of onset.

We found AD to be significantly associated with the combined FLG-null genotype and individual mutations R501X and 2282del4 ($p< 0.001$). Early onset AD, palmar hyperlinearity, and asthma in the context of AD showed significant associations with the combined null genotype. Outcome and response to treatment were independent of the FLG-null mutation status of patients. The carrier frequency of FLG-null mutations R501X, 2282del4 and S3247X was notably lower in Finns compared to previously reported frequencies in other populations.

Our data extends the knowledge of the effect of FLG-null mutations, and confirms them as AD risk factors in Finns. However, we demonstrate the low frequency of FLG-null mutations, and show that they do not seem useful biomarkers in predicting long-term response to treatment.

S09-3

RISK OF TYPE 2 DIABETES MELLITUS IN PATIENTS WITH ATOPIC DERMATITIS: A POPULATION-BASED COHORT STUDY

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Study objectives: Atopic dermatitis (AD) is a chronic inflammatory skin condition that has recently been associated with sedentary lifestyle. Interestingly, a higher prevalence of cardiovascular comorbidities and type 2 diabetes mellitus (T2DM) has been observed in patients with AD, but additional studies are warranted to determine the nature and cause of this relationship. We investigated the risk of T2DM in adult

patients with mild and severe AD, respectively, taking use of medication into account.

Materials and Methods: We used nationwide registers to identify adult patients with a hospital diagnosis of AD. Each patient was matched 1:5 with controls. Incidence rate ratios (IRRs) with 95% confidence intervals were estimated by Poisson regression models.

Results: A total of 27,300 patients with mild AD and 2,779 patients with severe AD were identified and matched with 148,428 controls. Patients with severe AD had a higher baseline prevalence of smoking, comorbidities such as hypertension and inflammatory bowel disease, but also use of prescription medication including topical and systemic corticosteroids, when compared to the mild AD and the reference groups. Risk of T2DM was increased in severe AD (IRR 1.39 [1.11–1.74]), however after adjustment for corticosteroid use, the estimates became non-significant (IRR 1.03 [0.82–1.29]). In patients with mild AD the adjusted risk of T2DM was significantly reduced (IRR 0.74 [0.68–0.82]). Furthermore, we found a positive dose-dependent association between potency of prescribed topical and systemic corticosteroids and risk of T2DM.

Conclusions: This study suggests that patients with severe AD have a higher occurrence of T2DM, likely due to increased use of topical and systemic corticosteroids. Patients with mild AD have a significantly decreased risk of T2DM. Increased focus on comorbidities in patients with severe AD, and awareness of long-term adverse effects of both systemic and topical corticosteroids is warranted.

S09-4

BIOLOGICAL DRUGS AND OTHER SYSTEMIC TREATMENTS FOR ATOPIC DERMATITIS

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Severe atopic dermatitis has a profound affect on many aspects of the patient's life. A combination of topical and systemic therapy is often necessary to control the disease, and today we have patients with severe disease activity, inspite of intensive treatment regimens.

Systemic corticosteroids are rapidly effective, but should only be used for a few weeks, for severe exacerbations, due to the many long-term side effects. In chronic cases you should therefore consider starting another systemic immunosuppressant therapy while tapering the corticosteroid. The usefulness of cyclosporine and azathioprine has been documented in clinical trials. Cyclosporin therapy is rapidly effective, but may increase the risk of chronic renal impairment. Azathioprine has a slower onset of action and is a good treatment option for many patients, but not always well tolerated. The usefulness of mycophenolate is documented in both prospective and retrospective studies, but remains to be assessed in larger randomized trials. Many clinicians use methotrexate as an alternative treatment, and if tolerated it is very useful for long term treatment. A few small studies have documented its effect in AD.

In contrast to the treatment options for psoriasis, until recently, only limited data existed regarding the use of biological agents for atopic dermatitis. Omalizumab, alefacept, rituximab, infliximab, mepolizumab, and apremilast among others, have been tried in single cases or small groups of patients.

The best studied biological agent for AD is dupilumab. The drug is targeting the Th2 cytokines IL-4 and IL-13, which both play important roles in the acute inflammatory reaction in AD. Randomised, double blind, placebo controlled trials have shown significant effect of dupilumab.

Many other biological agents are in clinical trials at the moment, but so far, not a lot of information regarding their effect has been published.

S10-1

HUNTING FOR GENES THAT AFFECT PSORIASIS IN ~2,900 CASES AND ~48,000 CONTROLS

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Introduction: Psoriasis is a complex disorder that results from the interplay of multiple genetic and environmental factors. Several genes functioning in immune responses have been identified to affect the disease, however, much of the genetic contribution to psoriasis remains to be explained.

Objectives: Our aim is to systematically assess genetic variation in psoriasis at the population level, with focus on rare and coding variation, as this variation is more likely to provide novel functional insights.

Materials and Methods: Genotyping is recently completed for 2,928 self-reported psoriasis cases and 47,852 non-psoriatic controls from the Nord-Trøndelag Health Study (HUNT), Norway, using the HumanCoreExome genotyping array from Illumina Inc. We expect that genotype imputation, utilizing 2,200 whole genome sequences from the same population, will make >10 million genetic variants available for analysis. To follow up our genetic findings, we plan to initiate a clinical biobank at St. Olavs Hospital, Trondheim, containing skin

biopsies and blood samples from persons with psoriasis and non-psoriatic controls.

Results and Conclusion: Genotype calling and quality control confirm high-quality genotypes with >99% average call rate and >99% overall concordance between duplicate samples. Preliminary genetic association results will be presented at the Congress.

S10-2

THE NUMBER OF FOXP3-POSITIVE CELLS AND THEIR CONTACTS WITH TRYPTASE-POSITIVE MAST CELLS INCREASE IN THE TAPE-STRIPPED, KÖBNER-NEGATIVE, PSORIATIC SKIN

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The proinflammatory function of Th1 and Th17 cells in psoriasis can be modulated by FoxP3+ regulatory T cells (Tregs). On the other hand, Tregs have been found to interact with mast cells (MCs) in a variety of animal models resulting in immunosuppression. Therefore, the purpose of this study was to investigate the role of Tregs and the interactions between Tregs and MCs in the early developing lesion of psoriasis. The Köbner reaction was induced in uninvolved psoriatic skin of 18 patients and subsequently skin biopsies were taken at 0 d, 2 h, 1 d, 3 d and 7 d. Eight patients developed the Köbner reaction as judged 2–3 weeks later. A second set of biopsies was collected from the untreated lesional skin and from the healthy-looking skin of 10 psoriatic subjects. These biopsies were analysed for the numbers of FoxP3+ cells and for the apparent morphological contacts (AMCs) between tryptase+ mast cells and FoxP3+ cells using immunohistochemical and double-staining techniques. When comparing the number of FoxP3+ cells between the two Köbner-groups, no significant differences could be seen in any time-point biopsies. However, within the Köbner-negative group the number of FoxP3+ cells was significantly higher in 3–7 day biopsies compared with 0d biopsies. The AMCs between tryptase+ and FoxP3+ cells was increased at 7 days in the Köbner-negative group as well. Also, the AMCs in the upper dermis of chronic psoriatic lesion was significantly higher than that in the healthy looking skin. These results suggest that suppressive factors, i.e., Tregs and Treg-MC interactions may prevent the development of psoriasis.

S10-3

IS THE PREVALENCE OF PSORIASIS INCREASING? RESULTS FROM A POPULATION-BASED COHORT STUDY IN NORWAY

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Psoriasis prevalence varies worldwide from <1 to 8.5%. There is indication of an increasing prevalence of psoriasis in some western populations. However, the results are not conclusive. Our objective was to analyze trends in the prevalence of psoriasis over 30 years, separating age, birth cohort and time period effects within a longitudinal cohort study.

Five population-based surveys in North Norway, the Tromsø Studies 2–6, collected between 1979 and 2008, were used for data collection. Participants aged 20–79 years with self-reported psoriasis data in at least one of the surveys were included, yielding a total of 69,539 observations from 33,387 unique individuals. The use of self-reported psoriasis diagnosis has been validated and found acceptable in a comparable Norwegian population. Trends in psoriasis prevalence were examined using graphical plots and further evaluated in generalized linear-regression models.

The lifetime prevalence of psoriasis increased from 4.8% in 1979–1980 to 11.4% in 2007–2008. Graphical plots showed an increasing prevalence of psoriasis with each consecutive survey in all examined age groups and birth cohorts, leaving time period effects as the explanation for the increase. The odds for psoriasis in the cohort were 2.5 times higher in 2007–2008 than in 1979–1980 (adjusted odds ratio 2.49, 95% confidence interval 2.08–2.99). In subgroups of the study population, psoriasis was associated with higher body mass index, lower physical activity during work and leisure time, lower educational level and smoking.

Our findings indicate a high and increasing prevalence of self-reported psoriasis. This could represent a true increase in prevalence, possibly due to changes in lifestyle and environmental factors, or an increased awareness of the disease. Our results are also supported by others, suggesting a possible trend of an increasing psoriasis burden in western populations.

S10-4

THE EFFECT OF WEIGHT REDUCTION IN PATIENTS WITH PSORIASIS

*Skov, Lone**

Danm, Denmark

Psoriasis is associated with an increased prevalence of cardiovascular risk factors, such as diabetes, arterial hypertension, and hyperlipidemia, and with an increased risk of myocardial infarction. In addition, psoriasis is associated with obesity, and obesity is a risk factor for incident psoriasis. Like psoriasis, obesity is accompanied by low-grade systemic inflammation, and obesity-induced proinflammatory mechanisms may exacerbate psoriatic lesions in overweight patients with psoriasis. The role of weight loss as a treatment for psoriasis in obese patients is unclear and we therefore wanted to measure the effect of weight reduction on the severity of psoriasis in obese patients with psoriasis. Sixty obese patients with psoriasis were enrolled in a prospective randomized clinical trial in which they were allocated to a control group or an intervention group. The intervention group received a low-energy diet (800–1,000 kcal/d) for 8 weeks to induce weight loss, followed by 8 weeks of reintroduction of normal food intake. The control group was instructed to continue eating ordinary healthy foods. The intervention group lost significantly more weight than controls. The weight loss had a positive effect on the degree of psoriasis measured by Psoriasis Area and Severity Index (PASI) and Dermatology Life Quality Index (DLQI). In addition the weight loss resulted in significant reductions of diastolic blood pressure, total cholesterol, VLDL cholesterol, triglyceride, plasma glucose and glycated haemoglobin. Furthermore long-term followed up indicate that long-term weight loss in patients with psoriasis results in long-lasting positive effects on the severity of psoriasis. In conclusion treatment with a low-energy diet showed a trend in favor of clinically important PASI improvement and a significant reduction in several cardio-vascular parameters.

S10-5

THE USE OF TOPICAL PSORIASIS TREATMENT IN DIFFERENT REGIONS OF THE WORLD

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Topical treatment is a mainstay in psoriasis vulgaris treatment and is used concomitantly even in patients receiving systemic therapy. Although several guidelines for the use of topical treatment exit, it is still unclear how these treatments are used in daily practice and whether differences exit between countries.

To address this question a survey among councillors of the International Psoriasis Council (IPC) was conducted. A questionnaire was send electronically to 99 councillors representing 26 countries and a total of 43 responded. All respondents were considered experts in psoriasis with special interest in the disease and a broad experience in treating patients. Data shows that respondents each treated between 15 and 300 psoriasis patients per month with a mean of 108 patients.

A total of 20 different countries were represented in the survey, with the number of respondents from each country ranging from 1 to 7. Regionally Europe was represented best with a total of 18 respondents whereas Asia, Australia and Africa were only represented by a few.

Participants in the questionnaire were asked about commercial availability of topical medication in their country. Furthermore they were asked how disease severity measured as a body surface area (BSA) below 3%, between 3% and 10% and above 10% influences the use of topical therapy as i)mono-therapy, ii)as a combination of two or more topical treatments and iii) in combination with a systemic drug.

The results of this survey will be presented and discussed in this presentation.

Acknowledgement: The survey was conducted on behalf of the IPC by: André Vicente Esteves de Carvalho, Brazil, Charles Lynde, Canada, Jashin Wu, USA, Brian Kirby, Ireland, Elise Kleyn, UK, Peter van de Kerkhof, Netherlands, Robert Bissonnette, Canada and Lars Iversen, Denmark.

Abstracts for Poster Presentation

P-01

REDUCTION IN ERRALPHA IS ASSOCIATED WITH LICHEN SCLEROSUS AND VULVAR SQUAMOUS CELL CARCINOMA

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Objectives: ERRs (estrogen-related receptors) regulate energy metabolism, the cell cycle and inflammatory processes in both normal and cancer cells. Chronic inflammation induced by lichen sclerosus (LS) or human papilloma virus (HPV) precedes vulvar squamous cell carcinoma (vulvar SCC). We investigated the expression of ERRα, ERRβ and ERRγ in normal vulvar skin, LS as well as LS-dependent and LS-independent/HPV-related vulvar SCC.

Material and methods: A total of 203 samples were analyzed for ERRα, ERRβ and ERRγ by using immunohistochemistry. These samples included 37 normal vulvar skin samples, 110 LS samples (24 childhood-onset and 86 adulthood-onset LS samples), 6 vulvar intraepithelial neoplasia (VIN) samples and 50 vulvar SCC samples. The ERR stainings were compared to clinical data.

Results: A substantial reduction in or disappearance of ERRα was detected in all vulvar SCC samples. ERRα staining was decreased in 79% of childhood- and 51% of adult-onset LS samples without progression to vulvar SCC and in 59% of the LS samples in patients with vulvar SCC. A gradual reduction in ERRα cytoplasmic staining was observed from healthy vulvar skin to precursor lesions and further to SCC. Nuclear ERRα staining was observed in 8/33 (24%) LS-dependent and 10/17 (59%) LS-independent SCC samples.

Conclusion: ERRα staining decreased in LS lesions compared to normal vulvar skin regardless of the course of the disease. Thus, a decrease in ERRα staining has no prognostic value in evaluating the malignant potential of LS. ERRα staining gradually decreases from precursor lesions to SCC, and a substantial reduction or loss of ERRα expression was detected in all vulvar SCC samples. ERRα loss seems to be specific to inflammation-induced cancer. Shift from ERRα cytoplasmic to nuclear staining was not associated with the prognosis in our patients, but it seems to increase with cancer progression in terms of histological grade.

P-02

TRICHOMONAS VAGINALIS INFECTIONS ARE RARE IN THE YOUNG STI POPULATION IN SWEDEN

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Trichomonas vaginalis infections represent the most common curable non-viral sexually transmitted infections (STIs) worldwide. Despite the high prevalence of infections, T. vaginalis has historically been underemphasized in STI control efforts. Trichomoniasis may cause vulvar irritation with malodorous discharge, dysuria and pelvic pain in women, and urethral discharge, dysuria and testicular pain in men. However, the infection may be asymptomatic in 50% of infected women and 70–80% in men. For diagnosis of trichomoniasis, microscopic examination of a wet mount preparation of vaginal secretions is the most frequently used method. This is a rapid and simple point-of-care test. If performed by an experienced microscopist, the specificity of wet mount microscopy can be high, however, the sensitivity is suboptimal, i.e. ranging from about 44% to 68% in women and even lower in men in comparison with highly sensitive and specific nucleic acid amplification tests (NAATs). The aim of this study was to investigate the prevalence of T. vaginalis infections among patients attending an STI clinic in Sweden using the APTIMA Trichomonas vaginalis assay. During the study period, urine specimens from 501 males and 460 females, and vaginal swabs from additional 160 females were collected. Only one specimen positive in the APTIMA T. vaginalis assay was identified and the prevalence of T. vaginalis infection was accordingly 0.09% in this STI population in Sweden. T. vaginalisinfections have previously been associated with higher age of females as well as with ethnicity, i.e. black race. In the present study, only 9% of the females were more than 40 years of age and ethnicity was not adequately recorded. The limitations of this study were the low number of women ≥40 years and the lack of appropriate recording of ethnicity. Additional studies are crucial to provide evidence-based data regarding the prevalence of T. vaginalis infections in Sweden as well as in additional countries.

P-03

DERMATITIS ARTEFACTA: STILL UNDERDIAGNOSED IN 2015

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Study objectives: Dermatitis artefacta (DA) is defined as self-inflicted skin lesions created by the patient on his own skin, to satisfy a psychological need, of which she or he is not consciously aware. It is one of the most challenging disease for the physician, both for the diagnosis and its management.

Methods and material: A retrospective monocentric review of 6 patients with DA seen between 2014 and 2015.

Results: Six patients (5 women, mean age 45,6 (16–73), mean age at onset of the lesions 43 (12–71)) were seen in our skin hospital. One patient had symptoms for 9 years. They displayed the characteristic features of DA: geographic, bizarre-shaped unexplained lesions located on accessible areas (limbs *n*=5, abdomen *n*=1, hand *n*=1), the lack of alternative condition to explain the lesions, a "hollow" story and an unadapted patient behavior. Clinically, lesions presented as blisters (*n*=3), erosions (*n*=3), ulcers (*n*=2), panniculitis (*n*=2), and striction erythema (*n*=1). Histology was always no specific. One patient had been biopsied 15 times with no diagnosis. Unusual bacterias such as E faecalis or E cloacae were found in 2 cases. Only one patient displayed a past history of psychiatric disease (bipolar disorder). Healing of the lesions under proper care were observed in 5 cases, but relapsed occured in 3 of them. Three patients were lost at follow-up while one is still under care for her lesions. Two have healed completely with no relapse.

Conclusion: DA is a difficult condition that can be easilymisdiagnosed. While we detected 6 patients within a year, it appeared clear that this condition was underdiagnosed in our hospital as ICD 10 F68.1 (code for DA) had never been used between 2010 and 2015. Misdiagnosis leads to unwarranted explorations, repetitive hospitalizations, unnecessary (and possibly life-threatning) medical treatments. Dermatologists should learn to evoke "easily" DA in front of unexplained chronic skin conditions.

P-04

POOLED SAFETY ANALYSIS OF APREMILAST UP TO 182 WEEKS: RESULTS FROM PHASE 3 CLINICAL TRIALS

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Study objectives: Randomized, placebo-controlled phase 3 trials have demonstrated that apremilast (APR), an oral phosphodiesterase 4 inhibitor, is clinically effective for the treatment of moderate to severe plaque psoriasis (ESTEEM 1 and 2) and psoriatic arthritis (PALACE 1–3). Pooled safety analysis of APR from these trials, over 3 years (yrs), is reported.

Methods and Material: Safety data available through February 14, 2015 are reported between 0 and 182 weeks (wks).

Results: In the pooled ESTEEM 1 and 2 analysis, 1,184 patients (pts) received APR 30 mg BID (APR 30; 1902.2 pt-yrs) between 0 and 182 wks. During this period of time, no new AEs occurring in ≥5% of pts were reported. Between 0 and 52 wks, diarrhea, nausea, headache, and tension headache were mild to moderate in severity and occurred in ≥5% of pts. Overall, the exposure-adjusted incidence rates (EAIR)/100 pt-yrs for AEs, serious AEs and discontinuation of study drug due to AEs, between 0 and 182 wks, were low and similar to those reported between 0 and 52 wks. EAIR/100 pt-yrs for serious AEs was 5.9 and, for discontinuation due to AEs, was 7.0; for the period between 0 and 52 wks, EAIR was 6.4 and 10.2, respectively. No increases in rates of MACE (EAIR 0.5), malignancies (EAIR 1.2), depression (EAIR 1.8), or suicide attempt (EAIR 0.1) were reported. Three deaths (1 per yr) occurred during the 0 to ≤182 wk APR-exposure period (EAIR 0.2). Mean (median) percent change from baseline in weight was –1.53% (–1.20%); weight loss >5% was experienced by 21.9% of pts. Pooled safety data from the ESTEEM and PALACE 1–3 trials included 1,905 pts treated with APR 30 (3527.5 pt-yrs) over 3 yrs and were consistent with those from the ESTEEM pooled safety analysis.

Conclusions: APR 30 was safe and well tolerated for up to 182 wks. No new signals were found. The severity and frequency of AEs did not increase with long-term APR 30 treatment.

P-05

CUTANEOUS COLLAGENOUS VASCULOPATHY: REPORT OF 4 CASES

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Study objectives: Cutaneous collagenous vasculopathy (CCV) is a recently individualized idiopathic acquired cutaneous vasculopathy with no systemic involvement and peculiar histopathology features. It was first described in 2000 by Salama & Rosenthal. Because this condition is rare and also may be underdiagnosed, we felt opportune to report a series of 4 cases illustrating this disease.

Methods and material: We describe retrospectively the clinical and histopathological features of a case series of patients

diagnosed with VCC in private practice

Results: Four patients, all women with fair skin complexion, aged from 12 to 80 years old presented with localized or widespread asymptomatic telangiectasia distributed symmetrically on the legs, thighs and lower abdomen evolving for years. In case, lesions were present on the breasts and abdominal stretch marks. Dermoscopy showed dilated red serpentine vessels with a branched pattern. The histological and immunohistochemical profiles were typical of CCV with i) dilatation with thickened vessel wall in the superficial dermis and ii) an amorphous hyaline eosinophilic PAS positive diastase resistant material with collagen IV deposition. There was no vasculitis, thrombosis, hemorrhage, amyloidosis or important inflammatory infiltrate. Management was difficult. Flavonoids mixtures (diosmin hesperidin) were inefficient in one case. Brimonidine 0,33% (Mirvaso) seemed to provide some improvement, but the cost of the treatment limited its use. Similarly, 2 patients were suggested to under vascular laser treatment that was not accepted because of the cost issues.

Conclusion: CCV is a newly recognized benign vasculopathy, whose physiopathogeny remains unclear. Its main differential diagnosis is generalized essential telangiectasias. It is important that the dermatologist is aware of this new condition. The treatment is far fr

P-06

TATTOOING IN FINLAND: A SURVEY IN A TATTOO CONVENTION

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Study objectives: Tattoos have become increasingly popular in Northern Europe. There are currently very limited data about the features of tattoos and their complications in Finland.

Material and methods: We wanted to assess the demographic of tattooed individuals and the rate of complications on tattoos in Finland. An observational self-reported 15-question survey was performed among the visitors of a tattoo convention in Hämeenlinna, Finland during July the 24th and 25th 2015.

Results: Of the 46 tattooed respondents, 61% were women and the mean age was 33 years old. The mean number of tattoos was 4.8; for a tattooed body surface of 14%. The tattoos were multicolored in 56% of the cases (mean number of color 2.8). Twenty per cent reported at least one amateur tattoo and 6.5% only home-tattoos and 28% were still minor (<18 y) when receiving their first tattoo. An acute local adverse "tattoo reaction" was reported 8.6% that necessitated a medical consultation and treatment in 75% of the cases, but without any severe consequences. No chronic reaction or other complication was here reported.

Conclusion: Despite limitations due to a small sample size and the selection bias, the profile of the "tattooed Finn" is similar to others studies in Europe or in the USA.

P-07

COMPLIANCE TO LABORATORY CONTROLS FOR MONITORING METHOTREXATE TOXICITY IN PATIENTS WITH PSORIASIS

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Study objectives: To explore compliance to laboratory controls when screening for methotrexate toxicity in patients with psoriasis.

Methods and material: Patients with psoriasis on methotrexate treatment were included in a retrospective study. The recommended laboratory controls at the Department of Dermatology, Karlstad, includes pre-treatment laboratory tests (creatinine, hemoglobin level, leucocyte count, platelet count, alanine aminotransferas ALT), then repeat laboratory controls (hemoglobin level, leucocyte count, platelet count, ALT) every week the first month, thereafter once a month for the first six months; a total number of 10 separate visits for laboratory tests during the first 6 months of treatment. Compliance was calculated as the proportion of visits for laboratory tests that each patient attended. Low and very low compliance was defined as ≤5/10 and ≤2/10 fulfilled visits, respectively.

Results: Forty-eight patients who were commencing methotrexate treatment and were treated for at least six months were identified. Out of the totally 10 visits for laboratory controls, a median number of 9 (2:10; min:max) were carried out. Fortythree patients fulfilled ≥6 visits, 40 of them fulfilled ≥8 visits. Five out of 48 patients (10.4%) fulfilled ≤5, two of them fulfilled ≤2 visits for laboratory controls. The number of missed visits increased statistically significant over time, p=0.01. The first laboratory control visit was missed by 6% of patients and the last was missed by 27% of patients.

Conclusion: Ten percent of patients in the study had low or very low compliance for laboratory controls to screen for methotrexate toxicity. Compliance also statistically significant decreased over time. Low compliance to blood monitoring puts patient safety at risk, as serious drug toxicity may not be noticed in time.

P-08

THE EFFECT OF NARROW-BAND UVB-RADIATION TO THE SERUM 25(OH)D3 CONCENTRATIONS AND MOOD ACCORDING TO THE SEASONALITY ON HEALTHY VOLUNTEERS

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Background: In literature Vitamin D balance is suggested to associate with depression.

Material and Methods: Altogether 11 female volunteers aging mean 42 years (24–62) participated in the study to monitor the impact of 4 consecutive daily (1-3 SED) narrow-band (NB) UVB exposures on their vitamin D (VitD) balance and mood. Blood for VitD (25OHD3) was sampled each time immediately before the NB-UVB exposure and 24 h after the last exposure. The experience of seasonal affective disorder (SAD) was asked using Seasonal Pattern Assessment Questionnaire (SPAQ). The current mood state on each research day was asked using the Visual Analogue Scales (VAS) which was divided in 4 dimensions. On a VAS scale 0 to100 mm the values close to zero depicted better feeling of mood. The study was implemented at the Tampere University Hospital, Department of Dermatology and Venereology during October-November 2014, when sunlight was negligible.

Results: Of the volunteers 4/11 appeared expressed SAD and 7/11 normal seasonal type. Mean VitD balance was increased statistically significantly within 5 days follow-up after an NB-UVB dose of 2-3 SED (p=0.001). The mean VAS (mm) of mood state decreased from the baseline showing better mood in the end of the study. The change of VAS in mood was –7.4 mm (mean, range –14.5–0.1, p=0.076). A correlation was shown between baseline serum VitD concentration and baseline mood state and in relative change in serum VitD concentration and change in mood state. Volunteers suffering from SAD symptoms had lower VitD concentration at the baseline and their mood state improved most during the examination.

Conclusions: NB-UVB exposure increases serum VitD concentration on healthy volunteers. Low VitD is associated with SAD symptoms. NB-UVB exposure may have a role in change of mood and seasonal affective disorder (SAD). This role may be associated with change in vitamin D levels.

P-09

MAST CELL CHYMASE REDUCES MIGRATION OF MELANOMA CELLS

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Mast cells are involved in the pathogenesis of melanoma, but their exact role at the cellular level has remained unclear. Previously, we showed that low numbers of chymase-positive mast cells associate with microsatellites in invasive melanoma in vivo. Therefore, our present aim was to study the effects of mast cell chymase on the detachment, viability, migration and proliferation of WM115- and MV3-melanoma cell lines *in vitro*.

Our results show that the WM115-melanoma cells originating from primary tumor were detached from collagen-coated wells by already 0.1 µg/ml rh-chymase during overnight treatment. The metastatic MV3-melanoma cells needed a higher concentration of rh-chymase (1 µg/ml) to be totally detached. Treatment of WM115-melanoma cells with 1 or 5 µg/ml rh-chymase overnight did not affect cell viability compared to non-treated control cells. However, rh-chymase reduced significantly the proliferation of WM115- and MV3-melanoma cells at concentrations of 0.01 µg/ml (p<0.05) and 0.1 µg/ml (p<0.05), respectively. In addition, the migration of WM115-melanoma cells was significantly reduced by 0.001 and 0.005 µg/ml rh-chymase after 6 hours (p<0.05-0.001) and by 0.005 µg/ml rh-chymase after 24 hours (p<0.05), while no effect was observed in the migration of MV3-cells. Chymostatin at 20 µg/ml inhibited the effects of rh-chymase on melanoma cells indicating that the effects are dependent on the catalytic activity of rh-chymase.

Our results show that mast cell chymase has inhibitory effects on melanoma cell proliferation and migration. This could explain, at least in part, the association of low numbers of chymase-positive mast cells with microsatellites in invasive melanoma in vivo. Further research on the interaction of mast cells and melanoma cells is ongoing.

P-10

CLINICAL OUTCOME FROM NARROWBAND UVB PHOTOTHERAPY TO THE QUALITY OF LIFE AND DISEASE SEVERITY IN PATIENTS WITH PSORIASIS OR ATOPIC DERMATITIS

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Introduction: Two major inflammatory skin diseases treated with phototherapy are psoriasis (PS) and atopic dermatitis (AD). Both have a negative effect on the quality of life (QoL). Narrowband ultraviolet B (NB-UVB) phototherapy is the most used phototherapy modality for its good effect vs. safety ratio. Our objective was to study the effects of NB-UVB phototherapy on the QoL, disease severity and ultraviolet radiation (UVR) dose of the patients in a nine-hospital study.

Materials And Methods: A total of 207 PS and 144 AD patients, referred to phototherapy by a dermatologist, completed the study. Patient-reported outcomes (DLQI, SAPASI, PO-SCORAD) were filled-in before, after and 3 months after the therapy. UVR doses were monitored by the Waldmann 7001 and 7002 NB-UVB cabins used in the study.

Results: Mean DLQI decreased from 10.1 by 6.3 units in PS patients and from 12.9 by 8.1 units in AD patients. The scores remained decreased after 3 months by 3.8 and 8.0 units, respectively. Mean SAPASI decreased from 11.7 by 8.6 units and PO-SCORAD from 40.4 by 18.9 units. After 3 months the decrease was still 4.9 units and 16.5 units, respectively. All score improvements were statistically significant ($p<0.001$). The mean UVR doses were 14.7 J/cm^2 in PS and 11.3 J/cm^2 in AD patients.

Conclusion: A course of narrowband-UVB phototherapy significantly improved the QoL and disease severity of patients with PS and AD for 3 months. AD patients achieved more long-lasting QoL improvement with a smaller UVB dose than PS patients.

P-11

HUMAN SKIN MAST CELLS EXPRESS PHOTORECEPTORS

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Circadian clocks critically influence mast cell (MC) functions and drive the daily rhythms in IgE/MC–mediated allergic reactions. In the skin, these clocks may be regulated by photoreceptors (PRs) such as cryptochromes (CRY) and opsins (OPN), which have recently been shown to be expressed by keratinocytes. Whether skin MCs express PRs has not been investigated and remains unknown.

Here, we studied the expression of selected PRs in human MCs using qRT-PCR. To this end, we used freshly isolated cutaneous MCs from breast, eyelid and abdominal skin, cultured MCs from breast and foreskin, CD34-positive peripheral blood stem cell-derived cultured MCs (PSCMCs), and LAD2-MCs. We found that freshly isolated MCs from breast and eyelid skin and cultured MCs from breast skin and foreskin express CRY1, OPN1 short-wave-length and OPN2 (Rhodopsin). Cultured foreskin MCs also showed expression of OPN3. MCs freshly isolated from abdominal skin, PSCMCs and LAD2-MCs were negative for the investigated PRs, suggesting that expression of CRYs and OPNs might be connected to MC differentiation and functionality.

Our results show, for the first time, that human skin MCs express several PRs. Our current studies are aimed at the identification and characterization of the role and relevance of PRs expressed by MCs including their effects on the circadian oscillation in MC functions and MC-mediated skin responses.

P-12

MEDICAL ADHERENCE TO TOPICALLY PRESCRIBED CORTICOSTEROIDS AND CORTICOSTEROID/CALCIPOTRIOL COMBINATIONS IN TREATMENT OF PSORIASIS

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Psoriasis is a chronic skin disease affecting 2–3% of the population. Topical corticosteroids and corticosteroid/calcipotriol combinations are the principal treatments in psoriasis. The aim of this study was to investigate published literature dealing with medical adherence to topical corticosteroid or corticosteroid/calcipotriol combinations in patients with psoriasis. Systematic electronic searches in English language literature were done until September 2015. Study selection and data abstraction were performed. From 2,501 studies identified, 11 studies were selected and consisted of five surveys, two prospective studies, one qualitative study, one mixed-method study, one register study, and one interventional study. One designed intervention consisted of a disease management program, which improved adherence in the study period. Overall, the studies included were heterogeneous and had a high risk of bias. Thirty-four multifactorial determinants of nonadherence were found. To improve health outcome in psoriasis, original studies investigating determinants of nonadherence and interventions to improve adherence are warranted.

P-13

GENERALIZED PUSTULAR PSORIASIS IN A 10 MONTH OLD GIRL

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Pustular psoriasis in children is one of the most severe variants of childhood psoriasis. It occurs in approximately 1% of pediatric patients with psoriasis and is often associated with malaise, fever and anorexia. The patients usually require hospitalization and courses are not uncommonly complicated by cutaneous infection and bacterial septicemia.

The disease is characterized by intermittent pustular exacerbations and variable duration of clearance. Relapses are common and may increase in severity.

In the current case a 10-month-old girl with GPP was admitted to our ward 3 weeks after initiation of Cyclosporine. Despite treatment with Cyclosporine her condition had worsened. During her stay at the hospital Cyclosporine therapy was stopped and Methotrexate was initiated. Gradually her condition improved.

In the presentation, a short discussion concerning therapeutic options is included.

P-14

ISOTRETINOIN EXPOSURE DURING PREGNANCY: A POPULATION-BASED STUDY IN FINLAND

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Study objectives: To estimate the occurrence of isotretinoin exposure in Finnish pregnant women and to analyse the occurrence of adverse fetal or neonatal outcomes in isotretinoin exposed pregnancies.

Methods and material: This is a population-based cohort study using national register data in Finland: the medical Birth Register, The Register of Congenital Malformations, the Drug Reimbursement Register and the Population Register. Study population comprised 961,443 offspring, representing all singleton live births, or termination of pregnancy (*n*=181,311) in Finland during 1996–2012.

Results: Altogether 191 pregnancies, were exposed to isotretinoin 30 days before or during pregnancy despite of the pregnancy prevention programme between study years 1996–2012. There were 37 singleton living births and 154 termination of pregnancy of all isotretinoin exposed pregnancies. 6/37 mothers had purchased isotretinoin during 30-day period before pregnancy, 26/37 during first trimester and 5/37 during second and/or third trimester of pregnancy. One newborn with major congenital anomaly was found among 37 single live births. 73% of mothers with live birth in exposed pregnancy were over 25 years old. Of women terminating their pregnancies, 23% were under 20 years old.

Conclusions: We found that despite more strict pregnancy prevention programme was implemented in 2005 in Finland, isotretinoin exposed pregnancies still occur at the same frequency and in the all age groups of fertile aged women. Compliance with pregnancy prevention measures during isotretinoin therapy still need improvement.

P-15

THE EFFECT OF NARROWBAND UVB TREATMENT ON THE SKIN MICROBIOME IN PATIENTS WITH CHRONIC PLAQUE PSORIASIS - A PILOT STUDY

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The cause of psoriasis not completely known but seems to result from a combination of genetic predisposition and exposure to environmental trigger factors, such as bacterial colonization. The bacterial microbiome differs between psoriatic lesions and healthy controls and psoriasis might be caused by a breakdown of immune tolerance to the microbiome of the skin. The aim of this pilot study is to analyze changes in the microbiome in patients with chronic plaque psoriasis before and after narrowband UVB treatment. Swabs from defined reference plaques were taken from four patients with chronic plaque psoriasis from both lesional and non-lesional skin before and after UVB treatment. None of the patients received oral antibiotics or topical treatments two weeks prior to entering the study or while participating. 16S rRNA gene was sequenced using Illumina MiSeq platform. Sequences were quality filtered and assigned to operational taxonomic units (OTUs) using the Quantitative Insights Into Microbial Ecology (QIIME) pipeline. All patients achieved PASI 75 in the reference plaques. The relative abundance of bacterial genera as Staphylococcus, Finegoldia and Agrobacterium increased in lesional skin after UVB radiation and decreased in Anaerococcus and Flavobacterium. In non-lesional skin Staphylococcus decreased whereas the abundance of Anaerococcus and Peptoniphilus increased. Statistical analysis shows no significant differences in the relative abundance between non-lesional and lesional skin before and after UVB treatment and no significant differences in the microbial diversity. Although these results were non-significant, possibly due to the low number of patients

included, we observed alterations in the microbiota after UVB treatment. Interestingly, we found Agrobacterium, mostly encountered in soils and plants and very rarely isolated in clinical specimens, to be present in all samples. Further studies are needed to explain the role of Agrobacterium in psoriasis.

P-16

HIDRADENITIS SUPPURATIVA IS CHARCTERIZED BY PAIN, PRURITIS AND MALODOUR. A STUDY OF SELF-REPORTED QUANTITATIVE DATA

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Objectives: Hidradenitis Suppurativa (HS) is a chronic, sometimes devastating, inflammatory skin disorder manifested by recurrent abscesses often leading to several co-morbidities, including pain, malodour and pruritus. These co-morbidities are frequently mentioned in articles pertaining to HS. We sought to obtain quantitative data to support these claims.

Method: 420 consecutive HS patients received a questionnaire. Questions included self-reported VAS scores for skin pain and joint pain for the past 7 days, and VAS scores for pruritus and malodour for the past 7 days. Additional questions addressed how many days for the past 30 days did the patients suffer from each of these symptoms, and duration of the disease.

Statistics: Means was calculated for scaled data, while median and mode was calculated for ordinal data. We performed a linear regression analysis analysing the effect of duration for each variable. Statistics were performed in SPSS 22.0 (IBM, USA), a *p*-value of 0.05 was considered significant.

Results: Data was received from 189 females and 47 males, mean age was 42.8 and mean duration of the disease was 22.11 years. Patients experienced an average of 9.7 (SD 9.8) days of skin pain/month, 10.5 (SD 12.0) days of joint pain/month, 10.0 (SD 10.4) days of pruritus/month and 8.2 (SD 10.8) days of malodorous discharge/month. None of the varibles correlated with disease duration.Mean/mode for VAS scores are presented in table I.

Conclusion: We have quantitatively shown that HS patients suffer from skin pain, joint pain, pruritus and malodour for substantial periods. The data indicate that the disease is highly variable, with some patients experiencing constant activity, while others have milder disease.We found no correlation between duration and severity of symptoms. We did, however, find a trend (p=0.051) towards duration affecting days with j

P-17

SUSTAINED EFFICACY OF APREMILAST IN PATIENTS WITH MODERATE TO SEVERE PSORIASIS WHO CONTINUED ON APREMILAST OR SWITCHED FROM ETANERCEPT

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Study objectives: LIBERATE, a phase 3b trial, evaluated the efficacy and safety of apremilast (APR) or etanercept (ETN) vs placebo (PBO) in biologic-naive patients with moderate to severe plaque psoriasis. Efficacy through Wk52 is reported.

Methods and Materials: Patients (n=250) were randomized 1:1:1 to PBO, APR 30 mg BID, or ETN 50 mg QW through Wk16 (PBO-controlled period); thereafter, all patients were switched to or continued on APR through Wk104. The primary endpoint was PASI-75 achievement at Wk16. Safety and mean percent change from baseline (BL) in PASI score were assessed at Wk16 and Wk52.

Results: At Wk16, PASI-75 was achieved by significantly more patients treated with APR (39.8%) and ETN (48.2%) compared to PBO (11.9%; p<0.0001, both; APR vs ETN, p=0.2565, *post hoc*); the mean percent change from BL in PASI score was –38.0% (PBO), –61.0% (APR), and –69.1% (ETN). These improvements were sustained overtime. For example, at Wk52, PASI-75 was achieved by 46.4% (PBO/APR), 50.6% (APR/APR), and 55.4% (ETN/APR) of patients. The mean percent change from BL in PASI score at Wk52 was –71.1% (PBO/APR), –73.0% (APR/APR) and –75.4% (ETN/APR). Most AEs were mild to moderate in severity and did not increase with prolonged APR exposure. The exposure-adjusted incidence rates (EAIR)/100 patients-years did not increase for serious AEs (PBO/APR: 9.16; APR/APR: 4.46; ETN/APR: 4.11) vs the Wk0 to Wk16 period (PBO: 0.00; APR: 12.47; ETN: 3.93). Similarly, discontinuation rates due to AEs were low and did not increase (EAIR/100 patients-years, PBO/APR: 6.78; APR/APR: 6.66; ETN/APR: 4.11) compared to the first 16 wks (EAIR/100 patients-years, PBO: 8.27; APR: 12.40; ETN: 7.87). Weight loss >5% was experienced by 18.6%, 10.0%, and 8.0% of patients in the PBO/APR, APR/APR, and ETN/APR groups, respectively.

Conclusions: In the first 16 wks, APR was well tolerated and efficacious, compared to PBO. The safety and efficacy of APR was sustained through Wk52, and maintained in patients treated with ETN who switched to APR.

P-18

PSORIASIS AND DEPRESSION, A SEX AND AGE DEPENDENT ASSOCIATION

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Background: Psoriasis is a common chronic systemic inflammatory disease. Patients with psoriasis have an increased risk of suffering from comorbidities such as cardiovascular disease, diabetes and depression. To our knowledge the prevalence of concomitant psoriasis and depression has not been studied in a Swedish population.

Study Objectives: To estimate prevalence rates of depression among patients with psoriasis in comparison to a Swedish reference population.

Methods and materials: Data was collected from Jönköpings Countys electronic medical records, (Cambio Cosmic) containing 341,845 nonselected individuals for the period studied. Patients with psoriasis were identified by ICD-10 codes and the prevalence of depression based on ICD-10 codes for this group was compared to the rest of the reference population.

Results: In total, 5,453 patients with psoriasis (prevalence rate 1.6%) and 25,559 patients with depression (prevalence rate of 7.5%) were identified, the latter being distributed in a 1:2 ratio male/female. The prevalence rate of depression was significantly higher in patients with psoriasis when compared to the reference population (13.0% vs 7.5%, $p<0.05$). The highest prevalence rates of depression were found among young women with psoriasis (20–29 years – 18.7%), (30–39 years – 23.0%), (40–49 years – 21.2%).

Conclusions: Patients with psoriasis in the study population are more likely to suffer from concomitant depression in comparison to individuals without psoriasis. Depression is more prevalent among women and clinicians meeting patients with psoriasis should be aware that the increased risk for depression is not evenly distributed between sexes and over age-groups. Young women (20–49 years) may need to be addressed with special attention regarding this comorbidity in clinical practice due to higher depression prevalence figures.

P-19

EFFECTIVENESS AND SAFETY OF SECUKINUMAB IN 45 PATIENTS WITH MODERATE TO SEVERE PLAQUE PSORIASIS REFRACTORY TO TRADITIONAL BIOLOGIC DRUGS

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Background: Randomised controlled trials have shown a marked efficacy of secukinumab (anti-IL17A) in the treatment of moderate to severe psoriasis. However, long term real-life data on the effectiveness and safety of secukinumab are lacking.

Methods: We present data from a dermatological university department on 45 patients with moderate to severe plaque psoriasis treated with secukinumab who were refractory to or had side effects of traditional biologic drugs.

Results: The study population comprised 22 males and 23 females with a mean age of 45 years. 21% of the patients had psoriatic arthritis. All patients initiated treatment with secukinumab 150 mg s.c. every 4 weeks (half the registered dose) due to treatment failure with anti-TNF (adalimumab, etanercept and/or infliximab) and/or anti-IL12/23 (ustekinumab). Preliminary analyses of the data showed that 29% of the patients experienced a significant reduction in symptoms with half of these patients having complete clearance. Limited clinical improvement, or side effects of the treatment, such as upper respiratory tract infections, conjunctivitis and ear infections were observed in 35% of the patients leading to discontinuation of treatment. The remaining 36% of the patients still await clinical evaluation to determine treatment effectiveness. Duration of treatment with secukinumab ranged 2–8 months.

Conclusions: Secukinumab appears to be an effective and safe treatment option in patients with psoriasis who are refractory to or have side effects of traditional biologic drugs. The effectiveness of secukinumab in biologics-naïve patients with psoriasis in a real-life setting awaits further evidence.

P-20

HISTOLOGIC STUDY OF BASAL CELL CARCINOMAS RECURRING AFTER PHOTODYNAMIC THERAPY: A COMPARATIVE ANALYSIS AGAINST ITS PRIMARY TUMORS

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Introduction and Objectives: Photodynamic therapy (PDT) is a non-surgical established treatment for basal cell carcinomas (BCCs). However, a significant percentage of patients develops recurrence. There are few studies which focus on the histopathology of these recurrent tumors. Our objective was to compare the histopathological findings between BCCs recurring after PDT against those of its pre-treatment tumors.

Materials and Methods: A retrospective study including BCCs treated with methyl aminolevulinate (MALT)-PDT. Cases were included only if both the primary tumor as well as the recur-

rence were histology-proven. Histopathological analysis were done by a blinded dermatopathologist evaluating a pre-defined checklist, including histologic pattern, presence of mucin, stroma density, among others.

Results: 15 patients were included. Mean age ±SD was 55 ±20. 9 (60%) were facial BCCs. Median time to recurrence was 11 months (range: 5–80 months). 8 (53%) recurrent BCCs presented a change from a less aggressive histologic pattern (superficial, nodular) to a more aggressive one (infiltrating, micronodular) . This aggravation was not statistical associated with time to recurrence nor location.

Conclusions: Post-PDT recurrences appear to have a tendency to display an increased histological aggressiveness. This aggravation is specially relevant for clinical practice in the case of facial BCCs. Large prospective studies, combining anatomical, immunohistochemical and molecular techniques, are necessary, as well as similar studies with imiquimod or 5-fluorouracil.

P-21

C3 AND COMPLEMENT FACTOR B REGULATE GROWTH OF CUTANEOUS SQUAMOUS CELL CARCINOMA

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The incidence of cutaneous squamous cell carcinoma (cSCC) and its precancerous forms is rising globally. Here, we studied the role of complement components C3 and complement factor B (CFB) in the progression of cSCC. Analysis of cSCC cell lines (*n*=8) and normal human epidermal keratinocytes (*n*=11) with quantitative RT-PCR and western blotting showed significant overexpression of C3 and CFB in cSCC cells. In cSCC tumors (*n*=6) the mRNA levels for C3 and CFB were markedly higher than in normal skin (*n*=10). Immunohistochemical analysis for C3 and CFB showed stronger intensity of staining in invasive sporadic cSCCs (*n*=71) and recessive dystrophic epidermolysis bullosa-associated cSCCs (RDEBSCC, *n*=11) than in premalignant epidermal lesions (actinic keratoses, *n*=65), in cSCC in situ (*n*=69) and normal skin (*n*=5) *in vivo*. Significant up-regulation of C3 and CFB mRNA expression was seen in chemically induced mouse skin cSCCs (*n*=27) compared to benign papillomas (*n*=17). The expression of C3 and CFB was higher in aggressive Ha-ras -transformed cell line (RT-3) than in normal epidermal keratinocytes or in less tumorigenic HaCaT cell lines (HaCaT, A5, II-4) at mRNA and protein level. The basal expression level was markedly up-regulated by IFN-γ and TNF-α in cSCC cells. Knockdown of CFB with specific siRNA inhibited migration and proliferation of cSCC cells and this was in association with potent inhibition of ERK1/2 activation. Knockdown of C3 or CFB with specific siRNA inhibited migration of cSCC cells. Moreover, knockdown of C3 and CFB significantly inhibited the growth of human cSCC xenograft tumors in vivo. The results provide evidence for the role of C3 and CFB in cSCC progression and identify C3 and CFB as putative therapeutic targets in cSCC.

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IMAGING OF SQUAMOUS CELL CARCINOMA, BOWEN'S DISEASE AND ACTINIC KERATOSIS VASCULATURE USING DYNAMIC OPTICAL COHERENCE TOMOGRAPHY

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Study objectives: Cutaneous squamous cell carcinoma (SCC) is the second most common skin tumour in humans. Actinic keratoses (AK) and Bowen's disease may represent early steps in a continuum from sun-damage to invasive SCC. Early detection of the lesions is therefore desirable, however no reliable clinical criteria to differentiate AK from early SCC exist. The objective of this preliminary study is therefore to investigate a novel non-invasive imaging tool called dynamic OCT, for visualising the vascular patterns of AK's, Bowen's disease and SCC in order to find out whether they can be differentiated.

Methods and material: In this preliminary study we investigated the dynamic OCT morphology of a total of 50 AK, Bowen's disease and SCC lesions identified clinically and verified by histopathology. Analysis was done qualitatively comparing en-face images of lesions with adjacent normal skin, describing the general vascular pattern of the lesions and comparing the different lesions.

Results: Dynamic OCT images of normal skin showed evenly-calibred blood vessels arranged in a well-defined, regular pattern. Dynamic OCT images of AK displayed vascular networks resembling normal skin, however the vascular calibre was generally more variable and in some of the lesions the vessels formed an irregular pseudo-network around the hair follicles. In Bowen's disease and invasive SCC the dynamic OCT images showed vascular features such as superficial dotted vessels and irregularly shaped vessels and generally a more pronounced vasculature was seen in the periphery of the lesion.

Conclusion: Dynamic OCT allows identification of blood vessels in both normal skin and AK's, Bowen's disease and invasive SCC to a depth of around 500 mm. Hyperkeratosis of the lesions remains a challenge for imaging of these lesions, however the preliminary data suggests that specific vascular features can be recognized in the lesions and may possibly aid in differentiating the different tumours.

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ATTITUDES TOWARDS SUNBATHING AND INDOOR TANNING IN FINLAND

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Study Objectives and Background: Sunbathers are aware of harmful effects of ultraviolet radiation, but continue to tan(1-3). This is proposed to be due to UVR dependent addictive behavior. The study assessed attitudes of Finnish beach goers towards sunbathing and indoor tanning.

Methods: The data was gathered using questionnaires, which included demographic data of respondents, the Structured Interview for Tanning Abuse and Dependence (SITAD) and the modified Cut down, Annoyed, Guilty, Eye-opener screening CAGE (m-CAGE) questionnaires (4–5), which evaluate tanning dependency. The questionnaire was distributed using a printed form or distributed internet link delivered to beachgoers (*n*=230) contacted in beaches or parks of city of Tampere and the Yyteri beach, in city of Pori.

Results: Of beachgoers 58.5 % (230/393) responded, and of them 54.9 % reported to sunbathe, whenever there was a chance. Using the SITAD questionnaire 12,2 % were classified as tanning dependent and with m-CAGE 5.7 %.

Conclusion: In spite of various sun protection campaigns at least half of Finnish respondents sunbathed, whenever it was possible. The results also indicate that alarming tanning dependency was a detectable phenomenon among Finnish citizens, which may impact on future numbers of skin cancers and show a crowing demand to renovate the skin cancer prevention campaigns.

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INFECTIONS IN MODERATE-TO-SEVERE PSORIASIS PATIENTS TREATED WITH BIOLOGIC DRUGS COMPARED TO CLASSIC SYSTEMIC DRUGS: RESULTS OF THE BIOBADADERM REGISTRY

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Background: There is not enough evidence of the safety of the biological drugs in psoriasis patients in long term and in real daily practice. The BIOBADADERM registry is a multicentre prospective cohort study in Spain.

Objectives: To describe the incidence rate of the overall number of infections, serious and recurrent infections of systemic drugs, including biological drugs (infliximab, etanercept, adalimumab and ustekinumab) and classical drugs (acitretin, ciclosporin and methotrexate) in patients with moderate-to-severe psoriasis. To compare the risk ratio (RR) of overall, serious and recurrent infections of the systemic drugs used in moderate-to-severe psoriasis (including combination of drugs) to methotrexate.

Methods: Multicenter, prospective, cohort study of patients receiving systemic therapies between 2008 and 2015 in 12 hospitals in Spain. Baseline data and drug discontinuation were collected. Methotrexate was used as comparator. We produced crude rate of infections, unadjusted and adjusted

RR of infection, serious infections and recurrent infections compared to methotrexate using Poisson regression.

Results: 1,938 patients were included for analysis with a total of 7,266 person-years. Infliximab has the highest rate of overall infections with 211.9 infections/1,000 person-years (95%CI: (163.1–275.4)) and shows a significant higher risk of infections compared to methotrexate [crude RR 1.63 (95%CI: 1.1–2.4)]; adjusted RR 1.71 (95%CI: 1.1–2.7)]. The combination of adalimumab with methotrexate shows a significant increase risk of infections compared to methotrexate [crude RR 2.04 (95%CI: 1.3–3.3); adjusted RR 2.13 (95%CI: 1.2–3.7)]. The highest rate of serious infections is in the ciclosporin group [crude RR 2.21 (1.0–4.8); adjusted RR 3.12 (1.1–8.8)] followed by adalimumab combined with methotrexate [crude RR 2.5 (95% CI: 0.7–8.9) and an adjusted RR of 3.28 (95% CI: 0.8–13.5)]. Adalimumab in combination with methotrexate has the highest risk.

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ANALYZING RENAL FUNCTION IN PATIENTS WITH HIDRADENITIS SUPPURATIVA BY USING URINE SAMPLES

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Objectives: Hidradentitis suppurativa (HS) has a number of co-morbidities, which may include renal amyloidosis in severe cases of HS and renal hyperfiltration. We aim to investigate a possible renal dysfunction in HS patients by studying urine and blood samples.

Methods: A retrospective study of HS patients from the dermatological departments of Roskilde Hospital, Denmark, Erasmus MC Rotterdam, the Netherlands, Hospital Quirón de Torrevieja, Alicante, Spain. Variables: age, sex, Hurley and Sartorius score, diabetes, hypertension and the presence of other skin diseases were studied. Most recently available eGFR and serum creatinine in the blood samples were included. The presence of glucose, acetoacetate, leukocytes, nitrite, protein, erythrocytes and the pH level were studied in urine samples. If leukocyturia was found, urine cultures were done. Statistical analyses included Kruskal-Wallis, Fisher's exact test with Monte Carlo simulation, univariable and multivariable linear and logistic regression analyses. The analysis between Hurley stage and leukocysturia, erythrocyturia and proteinuria was adjusted for age, sex, hypertension and diabetes.

Results: The majority of the included patients (n=137) had a disease severity of Hurley stage II (n=107). The mean of the disease severity Sartorius score was significantly different between the disease severity stages of Hurley (p=0.024). The unadjusted logistic regression analysis showed an increased risk of a reduced eGFR in Hurley II compared to Hurley I (OR=0.20, 95% CI 0.06–0.76, p=0.020). The hypertension and diabetes adjusted analysis resulted in a similar significant result (OR=0.23, 95% CI 0.06–0.80, p=0.026).

Conclusion: The data indicate that the renal function of HS patients may be impaired, as reflected by a reduced eGFR. The impairment is significant greater in Hurley Stage II than stage I. The results support the previous population derived data indicating that HS is associated with renal co-morbidity.

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ANTIBIOTIC SUSCEPTIBILITY TESTING OF PLANKTONIC AND BIOFILM FORMS OF CLINICAL STAPHYLOCOCCUS LUGDUNENSIS ISOLATES OF HIDRADENITIS SUPPURATIVA PATIENTS

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Objectives: Hidradenitis suppurativa (HS) is a debilitating inflammatory skin disorder with a recurring manifestation. HS affects the skin in the inverse areas of the body, i.e. axillae, groin, buttocks and inframammary areas, where painful, inflamed deep-seated lesions occur. Bacteria may play a role in the pathogenesis. *Staphylococcus lugdunensis*, an atypically virulent coagulase negative staphylococcal species (CONS), has been found in HS tissue. *S. lugdunensis* infections are associated with biofilm formation, which may lead to an inability to eradicate the infection. It has been suggested that the clinical course of HS resembles that of a biofilm-driven disease, although this aspect of HS is poorly described in the literature. We therefore aim to investigate the antibiotic susceptibility and biofilm-forming capabilities of *S. lugdunensis* strains identified in HS patients.

Methods: Skin biopsies will be obtained from patients with HS at the Dermatological Department of Roskilde Hospital, Denmark. S. lugdunensis isolates will be cultured and identified at the Statens Serum Institut (SSI) in Copenhagen, Denmark. As a quality control, S. lugdunesis reference strain ATCC 49576 will be used for the experiments. Planktonic growth curves, biofilm growth curves, planktonic Minimum Inhibitory Concentrations, biofilm eradication assays against the antibiotics clindamycin, doxycycline, rifampicin, tetracycline, as well a combination therapy with rifampicin and clindamycin will be performed.

Results: Preliminary results indicate that 40% of the planktonic forms of *S. lugdunensis* are resistant to the antibiotic clindamycin.

Conclusion: The role of bacteria in HS remains unclear. S. lugdunensis has been suggested as a key player. By describing the functional characteristics we hope to provide new insights into its possible role in the pathogenesis of HS. The reported beneficial effect of clindamycin on HS appears to contradict with the resistance found in S. lugdunensis.

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PHOTODYNAMIC THERAPY IN THE TREATMENT OF LENTIGO MALIGNA USING 5-AMINOLAEVULINIC ACID (AMELUZ) AS A LIGHT SENSITIZER – A STUDY IN PROGRESS

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Lentigo maligna (LM) is an in-situ form of melanoma which occurs on sun-exposed skin. Untreated LM can progress into invasive lentigo maligna melanoma (LMM). The incidence of LM/LMM is constantly on the rise as the population grows older. A novel imaging method hyperspectral imaging system (HIS) can be used for delineating margins of LM and for discovering potential invasion inside LM. The gold standard treatment for LM is surgical excision with adequate (≥5 mm) margins. Other treatment modalities have been studied but none of them still has proved to be efficient enough. Recently, photodynamic therapy (PDT) has been suggested as a promising novel treatment method for LM.

In this prospective pilot study we investigate the efficacy of PDT in treatment of LM. 10–15 patients with a histologically confirmed LM are included in the trial. The study course is as follows: During the first visit in the clinic the suspected LM lesion is examined clinically under Wood's lamp and imaged with a HIS camera. A biopsy is taken from the darkest-colored part of LM to confirm diagnosis and to rule out invasion. Next the patients receive PDT treatment 3 times with 2 weeks' intervals. Before applying the light sensitizer Ameluz the treatment area is prepared with fractional ablative CO_2-laser to enhance absorption. After 3 hours' absorption time the LM lesion is illuminated with red led lamp (Aktilite CL128) using a light dose of 90 J/cm^2. Finally 4 weeks after the last PDT treatment LM is surgically excised using 5 mm margins. The efficacy of PDT is assessed with histopathological examination and immunohistochemical staining (MART, Mel-5 and MITF stains). The final result of the treatment is controlled 6 months after the excision.

The current status of the study: The local ethical committee and Finnish Medicines Agency (FIMEA) have both approved the study design. Patient recruitment has started in January 2016. The results of the study will be expected in the beginning of the year 2017.

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FERTILITY, INDUCED ABORTIONS, PREGNANCIES AND DELIVERIES AMONG PATIENTS WITH NEUROFIBROMATOSIS 1

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Purpose: The purpose of this retrospective total population study was to form an extensive view of the fertility, abortions, pregnancies and deliveries of the neurofibromatosis type 1 (NF1) patients.

Methods and patients: The cohort of 1,471 NF1-patients was acquired by searching NF1-related hospital admissions and confirming the diagnoses reviewing the medical records. Ten control persons per NF1-patient were collected by Population Register Centre of Finland. Study groups were linked to the data from Medical Birth Register and Register of Induced Abortions. Standardized fertility ratio (SFR), abortion rate, duration of the pregnancy and delivery-related variables were analyzed.

Results: The SFR of the NF1-patiens was reduced to 0.87 (CI 95%: 0.766–0.983, p=0.027). The mean duration of the pregnancy was 39.21 weeks among NF1-mothers while being 39.82 weeks in the control group. The difference was highly significant (p<0.001). The mean length of the pregnancy of non-NF1-mother with a born child with NF1 was 0.45 weeks shorter than in the control group leading to the significant difference between the groups (p<0.001). Cesarean deliveries, hospitalization for hypertension during pregnancy and premature placental abruptions were significantly more common in the NF1-group whereas epidural block was significantly less common among NF1-patients. The rate of the abortions was not different between the study groups.

Conclusion: NF1 of the mother or the fetus is associated with the decreased duration of the pregnancy and increased pregnancy complications. This is the first study describing the effect of the NF1 of the fetus on the pregnancy. Considering the increased risk for the pregnancy complications among NF1-related pregnancies careful evaluation is needed when assessing these pregnancies.

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THE CLINICAL TIME COURSE OF ALLERGIC CONTACT DERMATITIS FOLLOWING REPEATED CHALLENGES WITH DIPHENYLCYCLOPROPENONE IN DE NOVO SENSITIZED INDIVIDUALS

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The immune reactivity exhibited by newly sensitized individuals following repeated exposure to a contact allergen remains largely unknown. Recent evidence suggest that repeated challenges with a potent hapten, diphenylcyclopropenone (DPCP), could result in an initial augmentation of immune responses followed by a response plateau. The objective of this study was to determine whether repeated exposure to DPCP drives the immune reactivity to ever-higher levels or results in a response plateau in newly sensitized individuals. Healthy volunteers (n=10) were sensitized to DPCP followed by 5 or 6 elicitation challenges with DPCP at four week intervals. The responses were scored visually and quantified as skinfold thickness measured with a caliper. The visual scores reached a plateau after two challenges, while the responses measured with calipers attained the plateau after 3 challenges. The almost identical time course of allergic contact dermatitis (ACD) as observed by visual scores and caliper readings, respectively, generated a strong positive correlation coefficient (R^2=0.9337) indicating a clear linear assocation between visual scores and skinfold thickness. We have shown that in de novo sensitized individuals, repeated challenges with DPCP result in immune responses with constant levels of reactivity over time. The clinically quantifiable and reproducible responses elicited in this inflammatory model system can be used to compare the anti-inflammatory effects of topical immunomodulating agents, including steroids.

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REAL LIFE DATA ON PSORIASIS PATIENTS TREATED WITH REMSIMA. ARE THERE ANY SIGNALS OF DIFFERENCE FROM REMICADE?

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Study Objectives: The patents on biologic drugs used to treat chronic inflammatory diseases are about to expire. First out is Remicade, and in Norway the patent expired as of 01.01.14. Two studies on Rheumatoid Arthritis and Ankylosing spondylitis patients showed the same effect between originator reference Infliximab (Remicade) and biosimilar Infliximab (Remsima/Inflectra). These two drugs have been approved for the same indications as Remicade has received approvment for (extrapolation of indications), inclusive Psoriasis. We wanted to study if there are any signals indicating different efficacy between Remsima and Remicade on Psoriasis patients.

Method: We report on real life data on Psoriasis patients being treated with Remsima for the last 2 years at the Dermatology department Haukeland University Hospital, Bergen, Norway. The data are based on 26 Infliximab naïve Psoriasis patients being treated with Remsima for at least 6 months and 27 Psoriasis patients who as of 01.01.14 were treated with Remicade. During 2015, 23 of these 27 patients have been included in the Nor-Switch study and we show you briefly the development of these 23 patients before and after they were included in the study. We register PASI, DLQI, through level and any indication of immunogenicity at each infusion for all patients.

Results: So far little difference has been observed with some question marks.

Conclusion: Based on our preliminary observations we have not observed any clinical relevant differences between the originator biologic and the biosimilar. This indicates that it is safe to include cheaper biosimilars in our daily practice.

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Author index (abstr.)

(* = presenting author)

Present and proposed bylaws of the Nordic Dermatology Association

Present bylaws	Proposed bylaws
The Nordic Dermatology Association Bylaws Adopted at the association's first meeting in Copenhagen in 1910; Amended - in Copenhagen1935, - in Stockholm 1946, - in Aarhus 1977, - in Reykjavik 1993, - in Bergen 1998 and - in Gothenburg 2001.	**Nordic Dermatology Association Bylaws** Adopted at the Association's first meeting in 1910, with changes in 1935, 1946, 1977, 1993, 1998, 2001, and 2016
§1. The purpose of the association is to promote cooperation in science, education, and clinical practice between dermato-venereologists in the five Nordic countries: Denmark, Finland, Iceland, Norway, and Sweden.	§1 The name of the association is Nordic Dermatology Association, abbreviated NDA. The principal place of its business is the work address of its secretary general. The official language of NDA is English.
§2. Individuals engaged in dermatology and venereology in these five countries are eligible for membership. It is required that their names be put forward by the dermatological association of the same country. The decision on their adminsion into membership is made by the general assembly of each congress by simple majority.	§2 NDA is a non-profit organization. All costs related to the activity of the board and committees appointed by the board will be reimbursed by NDA.
§3. Individuals who have made exceptional contributions to the association or to Nordic dermatology or venereology can be made honorary members by a two-thirds majority vote of the general assembly. Proposals for honorary memberships must be submitted in writing to the secretary general not later than three months before the congress and must be approved by the board before presentation to the general assembly.	§3 The purpose of NDA is to • promote the science and clinical practice of dermatology and venereology in the Nordic region • promote increased cooperation between the national societies of dermatology and venereology in Denmark, Finland, Iceland, Norway and Sweden and between their members • support contact and cooperation with similar organizations in other countries • organize congresses, courses and other meetings in order to improve the basic and continuing education of dermatologists and venereologists.
§4. The annual membership fee is determined at each congress. Members 65 years of age or older are exempt from payment.	§4 NDA has five member organizations, i.e. the national societies of dermatology and venereology in Denmark, Finland, Iceland, Norway and Sweden: • Danish Dermatological Society (*Dansk Dermatologisk Selskab*) • Finnish Dermatological Society (*Suomen Ihotautilääkäriyhdistys; Finlands Dermatologförening*) • Icelandic Dermatological Society (*Félag* íslenskra *hú›lækna*) • Norwegian Society of Dermatology and Venereology (*Norsk forening for dermatologi og venerologi*) • Swedish Society of Dermatology and Venereology (*Svenska Selskapet för Dermatologi och Venereologi*)
§5. The association normally meets at three-year intervals in one of the Nordic countries. The time and place of the next meeting is determined at each congress.	§5 The annual membership fees for the member organizations are determined by the NDA Board and should be proportionate to the number of members of each national society (except for corporate members). Fees are paid annually by each national society.

§6. The general assembly at each congress shall take up the following matters: 1. Treasurer's report. 2. Auditor's report together with release of the board from liability. 3. Annual membership fee for the 1. coming three-year period. 4. Election of board along with two auditors for the coming three-year period. 5. Election of research committee. 6. Time and place for the next congress. 7. Admission of new members. 8. Other matters.	§6. NDA will hold • a Nordic Congress in dermatology and venereology every three years, organized by one of the national societies • annual courses in dermatology and venereology • other meetings in order to improve Nordic cooperation in dermatology and venereology
§7. The board consists of the secretary general together with nine board members (one from Iceland and two from each of the other Nordic countries) and nine alternates. If not already a member of the board, the acting congress president will be included as extraordinary member and chair the board meetings and general assembly. The board elects the board president and the secretary general, who is also the association's treasurer. The secretary general does not serve for any set period, but the overall term should not exceed twelve years. The other board members serve from the close of one congress to the close of the next; they can be re-appointed for two additional three-year periods. National societies are requested to submit proposals for their country's representatives on the board at least three months prior to the congress.	§7 The NDA board consists of 14 members, i.e.: • The president of the national society, alternatively a board member, from each country • Two additional members from each national society, except Iceland, which will have one additional member All NDA board members are appointed by the respective national societies for three years and may be re-appointed for three more years. If vacancies occur, replacement members are appointed by each national society for the rest of the term. The NDA board elects among its members a president for three years. The president may be re-elected for three more years. The NDA board elects among its members a secretary general for three years. The secretary general may be re-elected twice for three more years. §8. The NDA board appoints the congress president of each Nordic congress. The congress president of the previous and next congress have meeting rights, but no voting rights, in the NDA board, except when being a NDA board member appointed by a national society. The NDA board appoints an education committee with 1-2 members from each national society for three years, including the committee's chairperson. The chairperson has meeting rights, but no voting rights, in the NDA board, except when being an NDA board member appointed by a national society. §9. The NDA Board should have at least one meeting annually. Place and date of the meetings are decided by the board, or when necessary, by the president and/or secretary general. The president is the leader of NDA and will chair all board meetings. In his or her absence, the meeting will be chaired by the longest serving board member. The secretary general writes the meeting protocols, which must be sent to the board members within 3 weeks for approval. No voting shall place unless at least six board members from at least three countries are present. Each board member has one vote. All decisions, except when stated otherwise in these bylaws, shall be passed by a majority of the votes. If an equal number of votes are cast for and against, the president or the acting chairperson of the meeting shall have the decisive vote. §10. The secretary general keeps the books of the NDA. The NDA board appoints two auditors who in time for the board meeting before the Nordic congress will prepare a financial report and discharge the board from financial responsibility. The term for the auditors is three years and can be renewed twice.

	§11. NDA organizes the Nordic Congress in Dermatology and Venereology every three years. The NDA board is responsible for selection of date and place of the congress and for the appointment of the congress president. The congress president, in consultation with the NDA board and the board of the national host society, appoints the organizing committee for the congress. The organizing committee is responsible for proposing a congress budget, which are to be approved by the NDA board the latest 12 months before the congress. A balance of the meeting should be made available to the NDA board at the latest 3 months after the congress. The organizing committee is responsible for the congress program. An outline of the program should be approved by the NDA Board at the latest 12 month before the congress. § 12. The task for the education committee is to ensure that at least one Nordic educational course are held each year. The committee should make suggestions for potential course themes and organizers, for instance by adapting an existing national course. Course organizers must make sure that doctors from all five Nordic countries are accepted as course participants. The education committee should have at least one meeting per year. § 13. In exceptional circumstances the NDA board may decide to postpone a Nordic congress for up to one year. In such cases, the term of the NDA board and the NDA educational committee is increased to four years. §14. At the last board meeting of its term, the board should prepare a report which are to be sent to the boards of the national societies, containing: • The president's report on the activities of NDA during the term • Review of NDA finances by the secretary general • Auditor's report • Annual membership fee for the forthcoming term • Time and place for the next Nordic congress §15. Nordic Forum for Dermato-Venereology is the official journal of the NDA. §16. Proposals for changes in these bylaws may be put forward by the board of a national society and must be sent for review to the other national societies at least three months before a NDA board vote. Changes in the bylaws must have the vote from at least eight NDA board members from at least four countries. §17. A proposal for a dissolution of NDA may be put forward by the board of a national society and must be sent for review to the other national societies at least three months before a NDA board vote. Such a proposal needs the votes from at least eight NDA board members from at least four countries. In the case of dissolution, the assets of NDA will be given to the five national societies proportionate to the number of members in each national society (except corporate members).

Agenda for the General Assembly
Nordic Dermatology Association
April 29th, 2016, Trondheim

1. Greetings from the president
2. Board report on activities of 2013-2016
3. Review of suggested New Bylaws
   Voting
4. Treasurer's report
5. Auditor's report together with release of the board from liability
6. Annual fee 2016 to year of next congress
7. Appointments for the forthcoming three-year period:
   - Board members
   - President
   - Secretary general/treasurer
   - Auditors
   - Education committee
8. Time and place for the next congress
9. Presentation of Forum for Nordic Dermatology and Venereology /www.medicaljournals.se/forum
10. Open topics
11. Closing of the meeting

Joanna Wallengren
Secretary General and treasurer

NDA Board 2013-2016

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NDA

Financial Report 2013-2016

Financial summary for 2013	
Opening balance	*719 780kr*
Opening balance fund assets	*572 607kr*
Interest income	6 031kr
Membership fees (Sweden, Norway, Finland	29 130kr
Re-payment of guarantee	300 000kr
Surplus cash from Tampere congress	266 172kr
Travelling grants & Scholarships	-108 000kr
Other expenses	-94 414kr
Set up and Annual fee homepage	*(10727)*
Economic revision	*(2450)*
Production of Abstract	*(61500)*
Board meeting, Conference room, meal, travel costs (Copenhagen)	*(18429)*
Bank fees	*(1308)*
Taxes	-6 990kr
Year results	**391 929kr**
Change in value of fund assets	8 212kr
Balance Fund assets carried forward	*580 819kr*
Balance carried forward	*1 111 709kr*
Members Equity	**1 692 528kr**

Financial summary for 2014	
Opening balance current accounts	*1 111 709kr*
Opening balance fund assets	*580 819kr*
Interest income	2 961kr
Membership fees (Sweden, Denmark, Finland)	32 700kr
Other expenses	-35 917kr
Annual fee homepage	*(6250)*
Economic revision	*(2400)*
Statutes committee, meal, travel expences (Oslo)	*(7386)*
Board meeting, Conference room, meal, travel costs (Copenhagen)	*(19049)*
Bank fees	*(829)*
Year results	**-256kr**
Change in value of fund assets	6 674kr
Balance Fund assets carried forward	*587 493kr*
Balance current accounts carried forward	*1 111 453kr*
Members Equity	**1 698 946kr**

Financial summary for 2015

Opening balance current accounts	*1 111 453kr*
Opening balance fund assets	*587 493kr*
Interest income	0kr
Membership fees (All)	38 850kr
Other expenses	-68 732kr
Annual fee homepage and URL	*(7878)*
Economic revision	*(2450)*
Education committee meeting, Conference room, meal, travel costs (Stockholm)	*(21311)*
Board meetings, Conference room, meal, travel costs (Copenhagen)	*(36145)*
Bank fees	*(948)*
Year results	**-29 882kr**
Change in value of fund assets	-3 600kr
Balance Fund assets carried forward	*583 893kr*
Balance current accounts carried forward	*1 081 571kr*
Members Equity	**1 665 464kr**

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Auditors: **Jørgen Rønnevig**

Kristian Thestrup-Pedersen

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SVERIGE
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PORT PAYÉ