Dr Eimear O'Brennan
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I would like to thank the British Association of Dermatologists for their supporting in providing a fantastic learning opportunity and enabling me to attend the American Academy of Dermatology meeting in March 2019 in the beautiful city of Washington DC. The conference provided me with a myriad of learning opportunities that can only be alluded to in brief detail in this report.

The first inspiring lecture was provided by Dr Berson from Weill Cornell Medical college on the management of acne vulgaris. Dr Berson discussed at length the new topical and oral treatments available such as tretinoin lotion 0.05%, Tazaretene lotion, Trifarotene a 4th generation RAR$_{\gamma}$ selective binding agent, hypochlorous acid antimicrobial facial cleaner an anti-inflammatory treatment which decreases mast cell production and useful in mild to moderate acne. She also discussed new 2% topical minocycline that is available in a gel and foam that penetrates the epidermis and pilosebaceous unit. In addition, she discussed topical androgens such as clascoterone 17 alpha propionate 1% cream which targets the AR receptors in sebocytes and hair papilla cells within the pilosebaceous unit, it also inhibits sebum production and inflammation. The topical agent has illustrated statistically significant reductions in non-inflammatory and inflammatory lesion counts in phase 3 trials. New oral medications included Sarecycline a narrow spectrum tetracycline with few side effects that has two phase 3 trials illustrating efficacy in moderate to severe acne. She also discussed Lidose which is oral isotretinoin taken without food and the outcome of a phase 4 study on the long-term efficacy and safety in 166 patients. Relapse rates were examined in 104 patients after 20 weeks of treatment on an empty stomach, 83% required no further treatment. She further discussed acne controversies with isotretinoin use such as delaying procedures post treatment and the consensus recommendation based on expert survey of over 100 dermatologists, there is insufficient evident to support delaying; superficial chemical peels, skin surgery, fractional non-ablative laser procedures, vascular and pigmented lasers. She also discussed drug monitoring whilst on isotretinoin and advised that blood test monitoring may not be necessary to repeat after 2-3 months if all are stable and suggested that CK and GGT may be more useful than AST and ALT. Dr Berson also reviewed data on the microbiome and concluded that probiotics which are more targeted than antibiotics would be an appropriate adjunct to antibiotics to improve acne. She discussed devices used to treat acne such as particle assisted laser treatment and mechanisms of acne clearance with short pulsed 1064nm laser and 650-microsecond laser technology in decreasing inflammation via their phototoxic, antibacterial and photothermal effects. The peer reviewed success of micro needling was also discussed.

Dr David Goldberg discussed the use of superficial radiation therapy and their successful use in treating primary nonaggressive non-melanoma skin cancer on all skin surface areas, however lesions on the central face at higher risk of recurrence. SRT may give a better cosmetic outcome on the scalp, eyelid, external ear canal and helix and nasal ala. Many factors can affect eradication of a tumour including radio sensitivity, tolerance of surrounding normal tissue and tissue toxicity factors such as size and volume of the area, vascularity, underlying and supporting tissues. Ideal patients for SRT are elderly and poor surgical candidates or those where there is a potential for significant cosmetic, neural or functional limitations post operatively. He suggested factors to consider prior to selecting SRT including past injury to the dermis, areas that have been burned, frozen, scared or that have had chemical change done to the areas at a cellular level.

Dr Edward Cowen, Head of the Dermatology consultation service at the National Institute of arthritis, musculoskeletal and skin disease gave an interesting lecture on many of the rare inflammasome and interferonopathies. Dr Cohens general update on inflammasonopathies included Anakinra use in the treatment of pustular psoriasis, neutrophilic urticaria, DIRA/DITRA, PAAND the new PAPA like neutrophilic dermatosis with muscle involvement that is distinct from FMF. He also suggested considering a pyrin mutation in patients with complex HS. He continued his lecture on interferonopathies such as sting associated vasculopathy with onset in infancy (SAVI) the signs include severe acral, vasculopathy early onset systemic and pulmonary inflammation and chronic atypical neutrophilic dermatosis with lipodystrophy and elevated temperature (CANDLE) syndrome. He discussed the use of JAK inhibitors for interferon driven skin and systemic disease. He envisages that an immunologic gene signature may guide therapy for difficult, complex/polygenic skin disease.

Some very interesting lectures were provided by Dr Helmink, Dr Leboeuf, Dr Mihm, Dr Piris, Dr Sullivan and Dr Zakka on the new diagnostic and treatment modalities available for the management of melanoma. In summary anti- PD1 antibody therapy Nicolimumab and pembrolizumab decrease the risk of recurrence in resected stage 3 melanoma. Dabrafenib and trametinib decrease the risk of recurrence and improve overall survival in resected BRAF V600 mutation stage 3 melanoma. The role of total body imaging and the role of AI

There were many lectures on the new and emerging biologics for psoriasis and Jak inhibitors for eczema. I found the future treatments for eczema very interesting. The current efficacy of Dupilumab was discussed and the trial data of other monoclonal antibodies such as Lebrikizumab, Tralokinumab, Memolizumab, Fezakinumab. There were many lectures on the efficacy of Upadicitinib, Baracitinib, Arbocitinib , AN002, Crisaborole, Difamilast and oral HR4 antagonists 2pl-383787. The future is looking very positive for the management of atopic dermatitis which will be welcomed by dermatologists across the world.

Dr Mesinkovska of UCI health, Orange County gave a very informative lecture on the treatments of hair loss. She discussed at length the use of Tofacitinib and Ruxolitinib in treating alopecia and although there is not large trial data available on Ruxolitinib so far patients who have had severe disease for 10 years or less have a 60-75% response and 46-75% with Tofacitinib. She further discussed frontal fibrosing alopecia and its association with leave on skincare and sunscreen products. Beneficial treatments for FFA include hydroxychloroquine, pioglitazone, finasteride and isotretinoin.

There were so many interesting lectures at the AAD that are beyond the scope of this report. I feel that the AAD is a very beneficial conference to attend as a registrar in terms of learning and networking with dermatologists from all over the world. I am truly honoured to have been given this opportunity to attend.