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(22.4%) cases and clinical review carried out in 118 (77.6%) of cases. In total, 26 (17.1%) biopsies were taken. The top-five referrers were general practice (n = 27), paediatrics (n = 23), general internal medicine specialties (n = 21), acute medicine (n = 20), and accident and emergency (n = 19). When analysing the referrals against the ‘Referring Wisely’ report, the number of appropriate referrals requiring specialist input was 92 (59.7%) and there were 60 (40.0%) inappropriate referrals. Ninety-eight (63.6%) patients were subsequently followed-up virtually or in person. ‘Referring Wisely’ aims to promote collaboration between physicians and acknowledges that there is significant inconsistency in the pattern of referrals. This stems, in part, from a lack of agreement about which conditions should be adequately managed by a generalist and those where specialist input is necessary. We should acknowledge that the categories must not be used didactically as each case must be scrutinized individually; however, this analysis highlights a need for a rationalization of the referral process. We should promote and foster learning for common dermatological complaints that are being regularly referred but that should be manageable within the remit of all physicians. This includes the departmental production of condition-based, Trust-accessible referral and management guidelines, and continued interdisciplinary education such as grand rounds and departmental teachings.

P24
Dermatology medical student history taking via the telephone: a way to minimize disruption to medical education, particularly during a pandemic
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With an ever-ageing population the socioeconomic burden of skin disease continues to grow. Undergraduate dermatology training is essential to counter this. With dermatology exposure in medical schools limited by the current global COVID-19 pandemic, we demonstrate how we can minimize educational disruptions without compromising the holistic approach to dermatology teaching. At our medical school, fourth-year medical students undertook a 1-week clinical dermatology attachment before sitting their fourth-year summative, which includes a dermatology objective structured clinical examination (OSCE). In view of the reduced clinics as a result of the pandemic, we implemented a virtual history-taking project. Volunteer patients with common long-term skin conditions were selected in accordance with medical student curriculum and consented to participate from their own homes. Students were observed taking a focused, timed dermatology OSCE-style history using departmental mobile telephones in loudspeaker mode, to involve their peers. They were then asked to describe an image of the skin condition and to attempt a diagnosis and management plan. They received immediate feedback on their OSCE from both the patient and a dermatology trainee. The session was evaluated via a pre- and postsession student questionnaire using a Likert scale of confidence, as well as anonymous feedback for global qualitative assessment. Preliminary feedback from 35 pre- and postsession questionnaires demonstrated a marked improvement in students’ self-reported confidence in taking dermatology histories. Prior to these sessions, no students strongly agreed and 40% agreed to feeling confident in taking a dermatology history. Postsession questionnaires revealed that 37% strongly agreed and 62% agreed to feeling confident with taking a dermatology history. Students reported the opportunity to take histories from real patients useful and ‘phone calls worked surprisingly well’. This project allowed the educational process to continue amidst a pandemic. Students were able to appreciate the important aspects of a dermatology history and gained knowledge about therapeutics previously used in these patients, while having a safe, empathetic and sensitive interaction with patients with skin disease.

P25
The impact of the second wave of the COVID-19 pandemic on the quality of life of patients with skin cancer
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With now more than 82 million cases worldwide and almost two million deaths, the COVID-19 pandemic continues to present a major global healthcare challenge. While insight has been gained into the physical morbidity and mortality associated with Sars-CoV-2 infection, its effect on the quality of life (QoL) of patients with skin cancer remains largely unknown. To this end, patients with skin cancer attending the department of dermatology were invited to complete the COVID-19 Emotional Impact Survey (C-19EIS) and the European Organisation for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire (QLQ)-C30 questionnaires between 1 and 30 November 2020. Patients were divided into two groups: those attending routine follow-up appointments (group 1) and patients attending for outpatient systemic therapy (group 2). The time period coincided with the second national lockdown. In total, 101 patients (48 females and 53 males) with a mean age of 65 years (range 22–89) completed both questionnaires. The mean C-19EIS score was 3.8 on a scale of 0 (no impact) to 12 (severe impact); there was no significant difference between the groups. Patients undergoing systemic therapy showed significantly impaired physical (P = 0.006) and social functioning (P = 0.003). However, when compared with the published normative EORTC QLQ-C30 data, there was no evidence that the COVID-19 pandemic had significantly impacted upon overall QoL. Subscales of the EORTC QLQ-C30 were significantly inversely correlated with the C-19EIS, supporting its use as a tool to measure QoL in this patient cohort. Despite the COVID-19 pandemic, patients with skin cancer at our tertiary referral centre were
surprisingly resilient, although this may have reflected the comparatively low incidence of Sars-CoV-2 infection in the region. Further studies are required to determine the impact of COVID-19 on psychological wellbeing in patients with skin cancer in order to plan supportive interventions, if necessary.

**P26**

**Using the Vitiligo Noticeability Scale in clinical trials and clinical practice: construct validity, interpretability, reliability and acceptability**

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Systematic reviews have identified many vitiligo trials, but these use different and often unvalidated outcome measures, preventing the combination of results in meta-analyses and leading to research waste. To address this problem, a vitiligo core outcome set (VCOS) is being developed. Core outcome sets are internationally agreed minimum sets of high-quality, validated outcome measurement instruments that should be used in clinical trials for specific conditions. Their adoption improves trial design and allows meta-analysis of data from different trials, generating better-quality evidence to support patient care. Valid and reliable outcome measures are needed for the VCOS. We previously developed the Vitiligo Noticeability Scale (VNS) as a patient-reported outcome measure to assess one of the domains in the VCOS: cosmetic acceptability of repigmentation achieved with vitiligo treatment. When developing the VNS we used digitally generated images to show different levels of repigmentation. In this research, we used a large database of clinical images of vitiligo from the HI-Light Vitiligo trial, in order to assess the construct validity, interpretability, test–retest reliability and acceptability of the VNS. We used image pairs of vitiligo patches before and after treatment, plus VNS and other outcome data, from the HI-Light trial. We compared these with outcome assessments for the same image pairs made by clinicians and people with vitiligo who were not trial participants. We conducted hypothesis testing to assess psychometric properties of the VNS, using kappa statistics to assess agreement between outcome measures. We also ran three focus groups and an online discussion group to gain qualitative feedback on how the VNS is used by people with vitiligo. Our hypothesis that there would be a positive association between VNS and global treatment success at end of treatment was supported. The kappa statistic ranged from 0.41 to 0.91, depending on the VNS score used to define treatment success. A VNS score of 3 (partial treatment response) may be more highly valued by people undergoing vitiligo treatment than previously thought. Age and skin phenotype did not influence interpretation of the VNS scores. Other analyses confirmed VNS test–retest reliability (weighted kappa 0.73). Clinician-rated percentage repigmentation > 75% also showed good agreement with global treatment success (kappa 0.80). In the focus groups, people with vitiligo confirmed the VNS to be an acceptable and meaningful assessment. These findings support the case for including the VNS in the VCOS for the domain of ‘cosmetically acceptable repigmentation’.

**P27**

**Healthcare resource use and cost in patients treated with dupilumab in English hospitals**

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Since the reimbursement recommendation of dupilumab for moderate-to-severe atopic dermatitis (AD) by the National Institute for Health and Care Excellence in August 2018, > 5000 patients who were resistant to systemic therapy and likely receiving basic standard of care have received this treatment. While the majority of patients receive treatment through the manufacturer’s homecare scheme, we describe the real-world healthcare resource use associated with a specific cohort of patients receiving dupilumab in an outpatient setting in England, through analysis of Hospital Episodes Statistics data. In the absence of a code for dupilumab, all patients with a previous AD diagnosis (International Classification of Diseases, 10th Revision codes L208, L209, L308 and L309) receiving subcutaneous immunotherapy (X385) between 1 March 2017 and 1 March 2019 were included. We summarized attendances during the 1-year pre- and postinitiation, and second year postinitiation of treatment. Associated costs were estimated using Healthcare Resource Group tariffs. In total, 222 patients were included [125 adolescents (aged ≤ 17 years) and 97 adults (aged ≥ 18 years)]. Median age at initiation was 15.0 years (interquartile range 12.0–39.0). Adolescents had a mean of 11.2 day-case (DC) and outpatient (OP) appointments in the 1-year pretreatment initiation, at a mean cost of £2543 per patient; adults had a mean of 13.1 appointments at a mean cost of £1552 per patient. Both attendances and costs rose in the 1-year post-treatment initiation (adolescents: 13.9 appointments with an associated cost of £5201; adults: 16.4 appointments with an associated cost of £3069), and decreased to their initial level or less in the second year after initiation (adolescents: 8.5 appointments with an associated cost of £2311; adults: 13.1 appointments with an associated cost of £1628). The proportion of DC/OP appointments for the administration of treatment was 32% (adolescents) and 33% (adults) in the first year postinitiation, respectively, and 63% (adolescents) and 42% (adults), respectively, in the second year post-treatment. Limitations of the study include potential misclassification, i.e. immunotherapy was for another comorbidity, and the nongenerisability of this potentially specific cohort to patients self-administering dupilumab in a homecare setting. In conclusion, this exploratory analysis observed an increase in hospital resource use in the first year following the initiation of dupilumab, followed by a decrease to pretreatment levels or below in the second year in this hospital-initiated cohort. Its favourable benefit–risk