allow characterization of the genes and pathways associated with the biology of this specific transcription factor.

Results T-bet+ B cells, as well as ABCs and DN, displayed a statistical significant expansion in the patients, compared to the healthy donors. Interestingly, percentages of T-bet+ B cells and DN B cells positively correlated with the SLEDAI scores of the patients. Cell culture experiments conducted, revealed that all three drugs tested are capable of depleting T-bet+ B cells (while leaving unaffected the total numbers of lymphocytes, T cells and B cells, respectively). According to bioinformatics analyses, moreover, T-bet in B cells seems to affiliate with transcription factors that play a role in germinal centers' development (such as BCL6 and IRF8) in lupus patients, while in healthy individuals it affiliates with JUN. Additionally, an analysis regarding intracellular communications amongst B cell populations revealed that the transcription factor of interest is closely associated with inflammatory secretome during lupus.

Conclusions T-bet+ B cells associate with SLEDAI, thus can serve as a prognostic biomarker of lupus severity. Furthermore, these cells promote disease pathogenesis and can be targeted for therapeutic interventions.

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P120 UNVEILING CD4+ METABOLIC DYSREGULATION IN SYSTEMIC LUPUS ERYTHEMATOSUS: IMPLICATIONS FOR TARGETING MITOCHONDRIAL DYSFUNCTION

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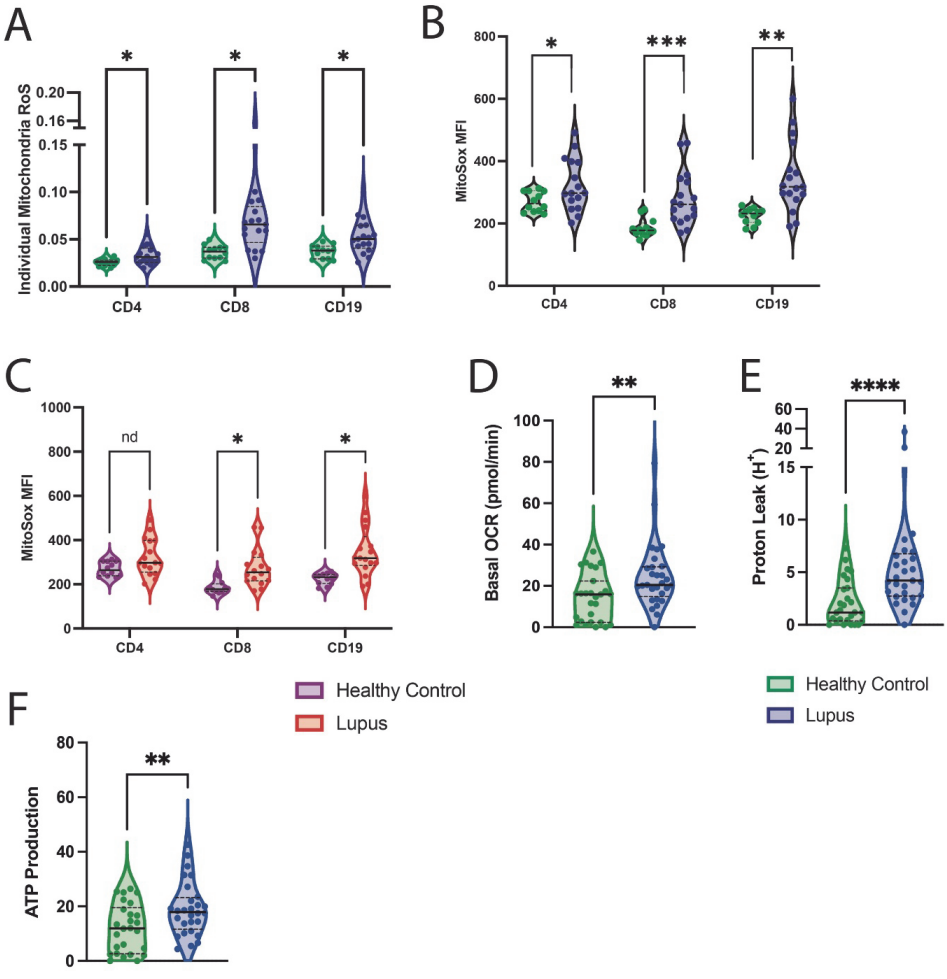
Objective Systemic lupus erythematosus (SLE) is characterized by persistent stimulation of the adaptive immune response and oxidative stress from Reactive Oxygen Species (ROS) generation. Mitochondria, central to energy metabolism through Oxidative Phosphorylation (OXPHOS), are implicated in the pathogenesis of SLE. This study aimed to assess abnormal mitochondrial function and associated ROS production in the adaptive immune response of SLE patients.

Methods Initially peripheral blood mononuclear cells (PBMCs) were isolated from SLE patients (n=37) and age/sex-matched healthy controls (HC, n=20). Flow cytometry (FC) was employed to quantify mitochondrial mass and mitochondria-



Abstract P120 Figure 1

derived ROS generation in $CD4^+$, $CD8^+$, and $CD19^+$ lymphocytes. Next, we sought to evaluate the influence of soluble serum mediators on cellular function. Healthy PBMCs were isolated and cultured with 10% serum from either SLE patients (n=17) or healthy donors (n=12), before quantify ROS with FC. To evaluate $CD4^+$ T cell derived cytokines on cellular metabolism, following magnetic bead isolation, CD4+ T cells were stimulated with anti-CD3/CD28 for 24 hours (HC=13, SLE=13). Following this, healthy PBMCs were culture in this cellular supernatant and ROS was again quantified by FC. Finally real-time CD4+ T cell mitochondrial metabolic function was evaluated using Seahorse Respirometry MitoStress Test.

Results When adjusted for mitochondrial mass, individual mitochondria-derived ROS production was markedly increased in $CD4^+$, $CD8^+$, and $CD19^+$ cells in SLE when compared with HC (figure 1A). Following co-culture with donor serum, healthy PBMCs cultured with SLE serum showed significantly higher ROS generation in $CD4^+$, $CD8^+$ and $CD19^+$ lymphocytes when compared with HC (figure 1B). Following co-culture with supernatant from stimulated $CD4^+$ T cells; $CD8^+$ and $CD19^+$ cells cultured with SLE $CD4^+$ T cell supernatant showed higher ROS formation than those cultured with HC $CD4^+$ supernatant (figure 1C). Seahorse Respirometry indicated higher basal CD4+ respiration (figure 1D), increased proton leak (figure 1E), and enhanced mitochondrial ATP production (figure 1F) in SLE, suggesting closer proximity to maximal function with limited upregulation potential.

Conclusion These findings underscore the significance of abnormal immune cell metabolic pathways in SLE, highlighting potential therapeutic targets. Targeting $CD4^+$ T cell mitochondrial dysfunction may offer a novel approach for future therapeutic intervention.

P121 ONLINE SUPPORT GROUP FOR LUPUS PATIENTS: THE TUNISIAN EXPERIENCE

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Objective According to studies, Patient support groups (PSG) have shown effectiveness in improving patients quality of life, hence the recommendation to include them in patient therapeutic education programs. In Tunisia, a group dedicated to patients with Systemic Lupus Erythematosus (SLE) was created a few years ago.

The aim of our work was to assess the impact of PSG for Tunisian SLE patients.

Methods A qualitative cross-sectional study carried out in June 2023, based on a Google Forms questionnaire distributed in the Facebook group supporting SLE patients 'Let's talk about Lupus: Tunisia'. Answers were open and treated anonymously. Participation was voluntary.

Results 22 members participated. They were all women. The average age when participating was 38.5 years [20;67]. The duration of disease progression was 11.76 years [0.5;26]. The average group membership duration was 2.76 years [0.5;6]. Answers to the question 'Why did you join the group?' were: seeking moral support (n=10); better understanding of SLE (n=9); Looking for people who are going through the same experience (n=5); helping others (n=4); contributing to donations of medicines (n=1). Most reported answers on 'how did the group help you?' were: not feeling alone (n=12); Better understanding of SLE (n=7); moral support (n=6); encouragement and positive vibes (n=4); no help (n=3); awareness regarding therapeutic adherence (n=2); Benefiting of medicines donations (n=2). Sixteen participants double-checked medical information communicated by members on other platforms or with their doctors. For the question 'what changed since you joined the group?', answers were: I learned that I can live with SLE (n=13); I understood that I am not alone (n=7); Lupus varies from a patient to another (n=5), Nothing (n=3). The group limitations reported were: the negative messages and false information that can be disseminated, the lack of commitment of some of the participants and doctors. Participants' expectations of doctors were: answering questions (n=20); correcting false information communicated by members (n=19); showing more psychological support (n=10); giving general advice on daily hygiene (n=8).

Conclusions The Tunisian PSG seems to partially meet its objectives. An active presence of the medical and paramedical professionals could support its role in awareness-raising and therapeutic education. Well-structured coordination between the group and medical societies could fullfil this need.

P122 SKIN DISEASE BURDEN IN SYSTEMIC LUPUS ERYTHEMATOSUS: DATA FROM A MONOCENTRIC COHORT

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Objective Skin involvement in Systemic Lupus Erythematosus (SLE) is still often a challenge for the rheumatologist, who must consider patients' perspective in order to ensure the best quality of care. The aim of the study was to evaluate the impact of skin involvement on Health-Related Quality of Life (HRQoL) in a monocentric cohort of SLE patients.

Methods This is a cross-sectional analysis of prospectively collected data of adult consecutive SLE patients (2019 EULAR/ACR criteria) with skin involvement. The following data have been collected for each patient: demographics and clinical data, SLEDAI-2K and SLICC-DI. Clinical evaluation of skin was performed using the Cutaneous LE Disease Area and Severity Index (CLASI), which we used to define skin disease activity and damage. At each assessment, patients completed the following Patient Reported Outcomes: LIT, SLAQ, FACIT-F, HADS and Skindex-16.

Results We included 109 assessments in 59 SLE patients during the period February 2021 – June 2023. Cohort characteristics are shown in table 1. CLASI activity assessment correlated positively with Skindex-16 scores ($rs \geq 0.307$, $p \leq 0.002$) and to a lesser extent with LIT ($rs=0.231$, $p=0.02$); CLASI damage correlated positively con LIT, HADS depression and Skindex-16 functioning subscales ($rs \geq 0.280$, $p \leq 0.006$) and negatively with FACIT-F ($rs=-0.305$, $p=0.002$). Analysing potential differences in the impact of skin activity and damage on QoL, we noted that only the presence of active skin