



New Medications in Lupus

Ailda Nika, MD
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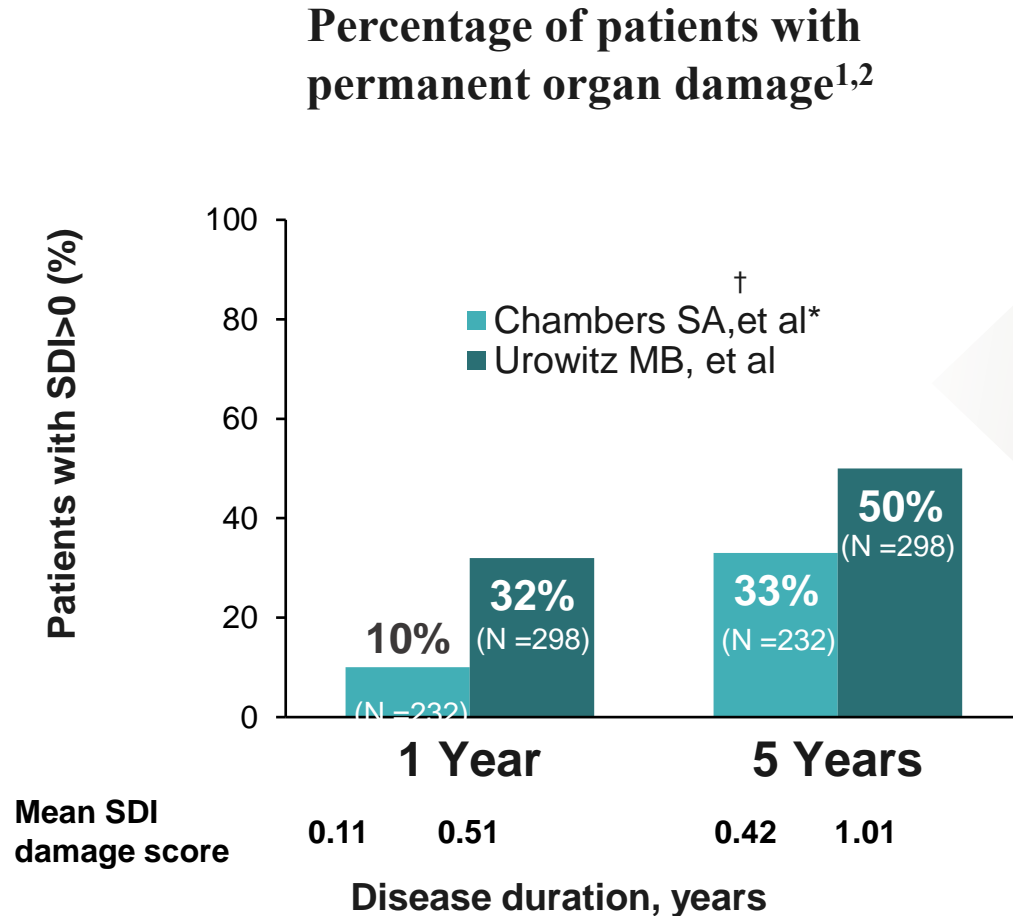
About Lupus

- Lupus is a diagnoses with a wide spectrum of organ involvement.
- Signs and symptoms vary considerably from person to person.
- Signs and symptoms vary over time and overlap with those of many other disorders.
- It can be mild to life threatening.
- Before [medications](#) were available to treat lupus, overall 5 year survival rates were less than 50%.
- With expanded therapeutic options, 5 year survival rates are now over 95%.

Treatment targets in Lupus

- Minimize SLE activity - Remission? Low disease activity? (clinical measures available)
- Minimize steroids use (whatever it takes not to use Prednisone > 5mg/d)
- Prevent flares
- Prevent damage accrual

Organ Damage Accrual in SLE



of patients with SLE accrued organ damage within 5 years of diagnosis^{1,2}

Organ damage is measured by the **SDI**, an internationally validated tool that captures damage caused by ongoing disease activity, flares, and medications used to manage symptoms³

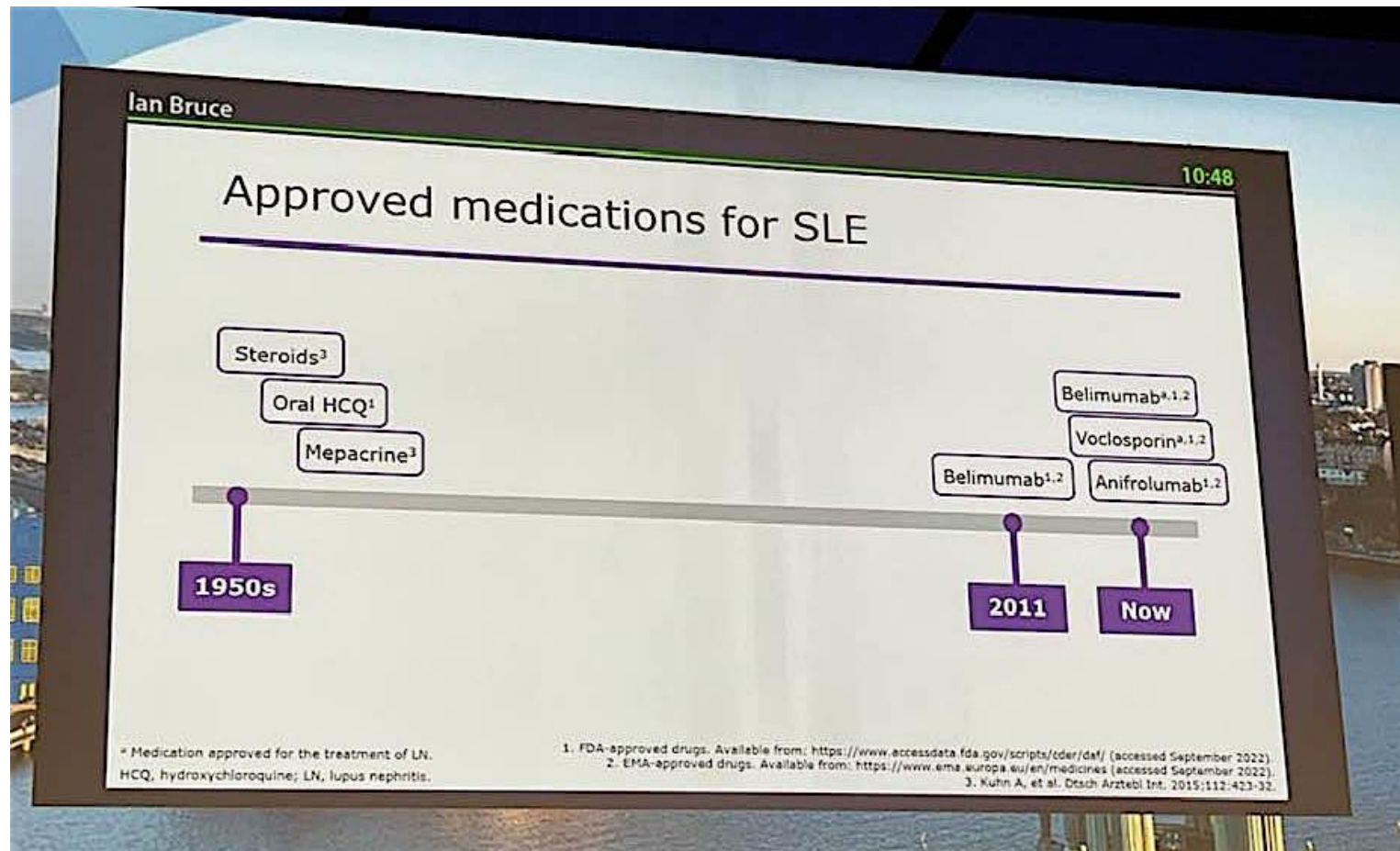
Early organ damage in patients with SLE is a predictor of poor prognosis^{4,‡}



How do we treat Lupus?

- Mild, moderate and severe
- Organ system affected
- Approved and non approved medications

Approved Medications in Lupus



The background of the slide is a photograph of medical supplies. In the foreground, several white, oval-shaped pills are scattered on a light-colored surface. Behind them, two plastic bottles are tipped over, spilling their contents. One bottle is orange and the other is white. The white bottle's label is partially visible, showing the words 'YOUR SE', 'TION PRO', and 'LED for'.

Non approved

-
- MTX
 - Azathioprine
 - Leflunomide
 - Mycophenolate
 - Rituximab
 - Cytoxan

Approved - NSAIDS

- Variety of choices
- Safest from cardioprotective standpoint- Naproxen (500 mg BID)
- Aspirin
- Stomach protection PPI



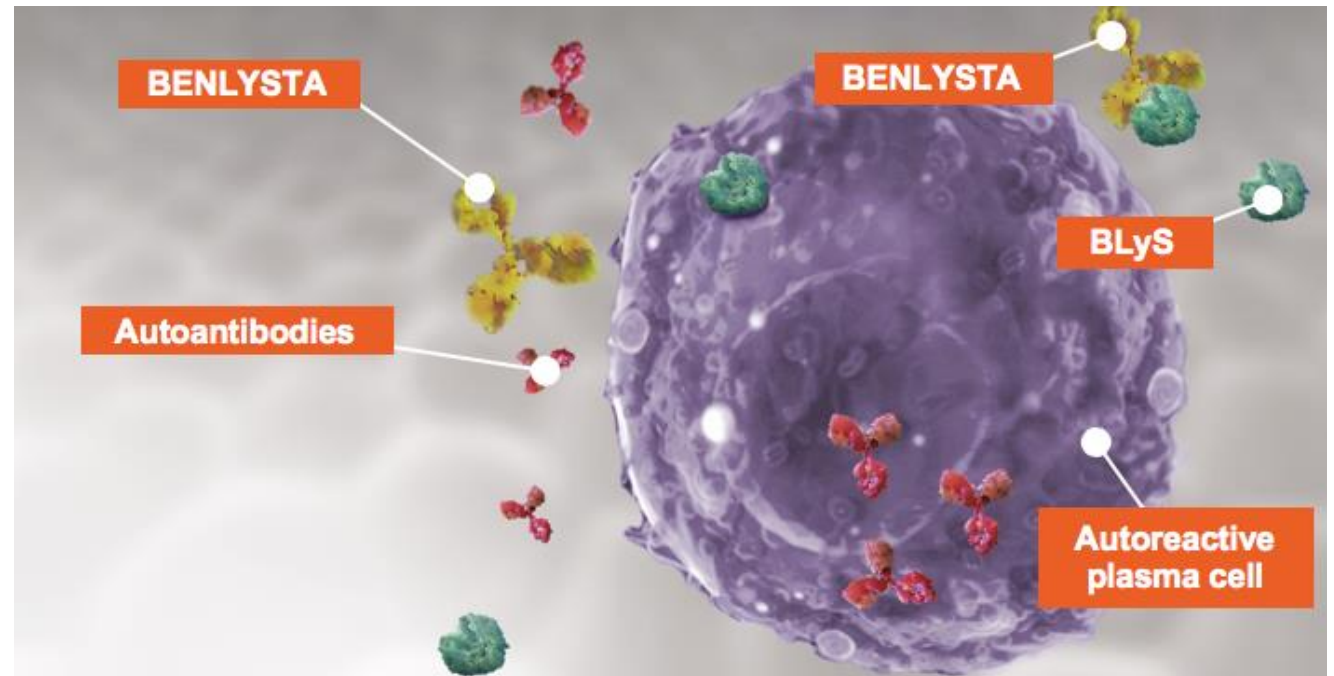
Antimalarials

- Chloroquine, Hydroxychloroquine and quinacrine (compounding)
- Prevent the activation of inflammatory cells
- Used in Lupus for over 50 years
- It diminishes the risk of damage accrual
- Helps with skin, arthritis/ joints
- 5 mg/ kg takes 6-12 weeks to work (6 months, maximal benefit)
- In addition lowers cholesterol, improves sicca, anti-coagulation



Belimumab (Benlysta)

- B Cell therapy
- Monoclonal antibody - BLyS, a protein required for B cell activity.
- IV (monthly) and Subcutaneous (weekly)
- Pediatric use (>5 years old)
- Approved 2011 (Safety data over 10 years)
- 2020 approved for LN



MAB therapy

- A monoclonal antibody is an antibody produced from a cell line made by cloning a unique white blood cell.
- Monoclonal antibody therapy is a form of immunotherapy that uses monoclonal antibodies to bind to certain cells or proteins.
- The objective is that this treatment will stimulate the patient's immune system to attack those cells.

Belimumab (Benlysta)

- Contraindications (allergic reactions, infections)
- Depression, suicidality
- Malignancy
- Pregnancy and lactation



Subcutaneous (SC) self-injection

via autoinjector or prefilled syringe for adult patients with SLE or lupus nephritis¹



Intravenous (IV) infusion

for adult and pediatric patients with SLE and adult patients with lupus nephritis¹



76% of patients with SLE taking BENLYSTA preferred administration with the Autoinjector over IV infusion^{2,3*}



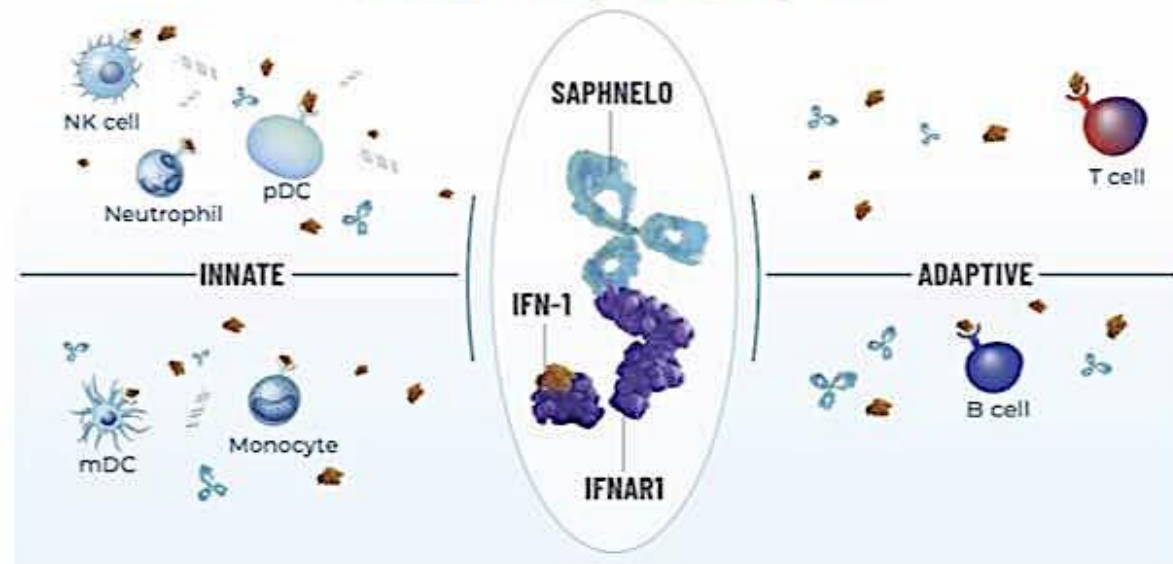
*A follow-up survey was conducted in patients with SLE (N=43) who completed open-label, multi-dose, usability, tolerability, and safety study of subcutaneous

Anifrolumab (Saphnelo)

- Blocks INF – Monoclonal antibody
- Approved for SLE in 2021
- Great for skin (INF - high in DLE, SCLE) and MSK
- 300 mg IV every 4 weeks over 30 minutes

THE FIRST AND ONLY SLE TREATMENT TO TARGET

SAPHNELO blocks the activity of IFN-1, a central mediator across both the innate and adaptive immune systems.



While previously seen primarily as a B-cell-driven disease, IFN-1 plays a role in the pathogenesis of SLE and acts early in immune dysregulation.

Anifrolumab (Saphnelo)

THE BREADTH OF BICLA* ASSESSES

COMPREHENSIVE IMPACT ACROSS ALL AFFECTED ORGAN DOMAINS

TULIP-2 PRIMARY ENDPOINT

Statistically significant BICLA responder rate vs ST alone at Week 52

47.8% (86/180) with SAPHNELO 300 mg + ST vs 31.5% (57/182) with ST alone ($P=0.001$)[†]



Reduction was related primarily to improvement in mucocutaneous and musculoskeletal organ systems.

BICLA is a composite measure of SLE disease activity, which requires improvement in moderately or severely affected organ domains at baseline with no worsening or new organ involvement.

TULIP-1: Primary endpoint (SRI-4 Responder Rate) did not result in statistical significance; the secondary endpoint (BICLA) achieved improvement (descriptive only).

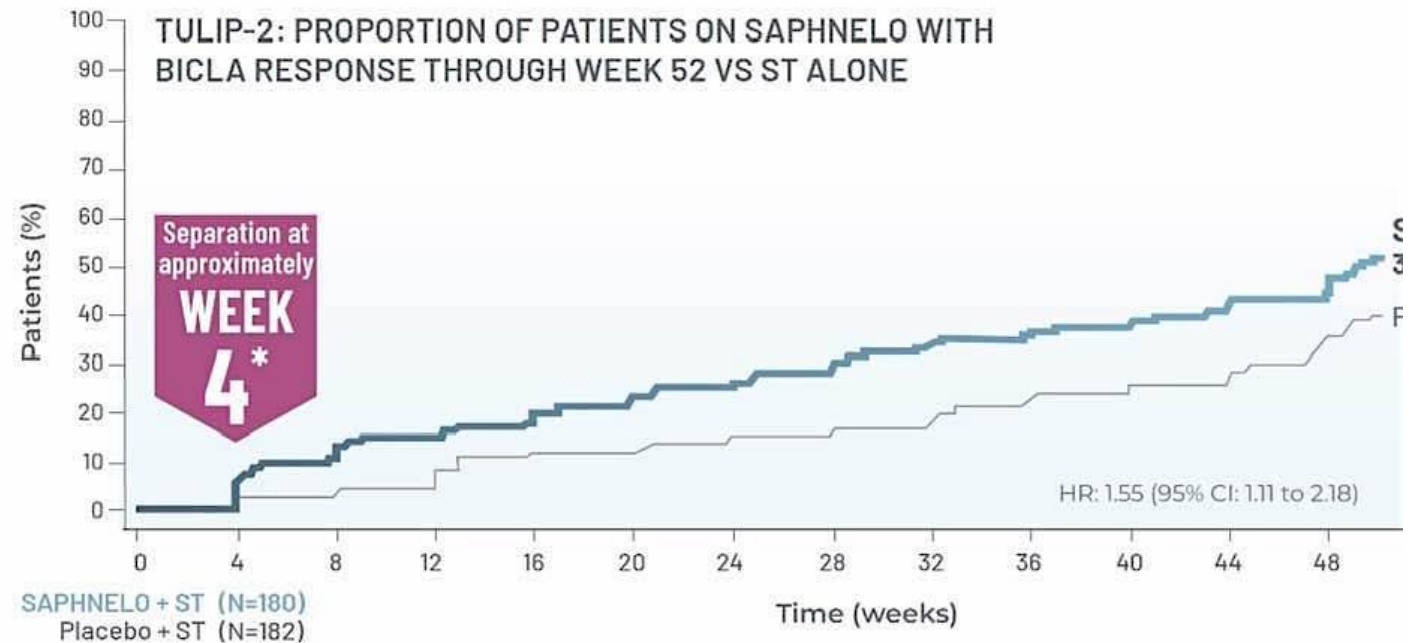
Efficacy of SAPHNELO was established based on the assessment of clinical response using the composite endpoints, |

Anifrolumab (Saphnelo)

For adults with moderate to severe SLE receiving standard therapy. Not for severe active lupus nephritis or severe active central nervous system disease.

RESPONSES WERE SEEN EARLY AND SUSTAINED

More patients on SAPHNELO + ST achieved sustained BICLA response over 52 weeks in TULIP-2 vs ST alone



Results were consistent in TULIP 1, as the time to sustained BICLA response favored SAPHNELO + ST (n=180) vs ST alone (n=184): HR 1.93 (95% CI: 1.38 to 2.73)

All results were descriptive only

Anifrolumab (Saphnelo) side effects

- Infection / URI, Herpes
- Cough
- Malignancy?
- Anaphylaxes
- Avoid live vaccines
- Avoid in pregnancy

Valclosporin

- Inhibits Calcineurin - approved in 2021 for LN
- In combination with other medications (MMF)
- Oral – 23.7 mg twice daily / 6 capsules divided in 2 doses (empty stomach)
- Less in Liver and kidney impairment or HTN
- No long term data available (3 years)



Valclosporin side effects

- GI (diarrhea)
- Renal- Kidney function
- HTN/ Cardiac (QT interval/ irregular heartbeat) – interactions(HIV, seizure, infections) or (grapefruit)
- Headaches
- Dose adjustments
- Avoid in pregnancy



Considerations

- Careful choice of available medications tailored to specific needs of patient
- Adjunct therapies
- Adherence
- New Therapies in horizon

Adjunct

- Sun protection
- Vaccination (Influenza, Corona, Varicella, Pneumococci, HPV)
- Exercise
- Smoking cessation
- Body weight
- Blood pressure, lipids, glucose

The Future looks bright





Questions?

Thanks - and Happy Holidays!

