Poster Board # P51

Real-World Treatment Patterns Among Pulmonary Sarcoidosis Patients with Parenchymal Involvement in the US

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Introduction

- Pulmonary sarcoidosis **treatment guidelines recommend systemic glucocorticoids** for first-line treatment, but **glucocorticoid toxicity warrants careful consideration** of treatment selection
- The **extent of glucocorticoid utilization as first-line and in later-line treatment** is not well documented

Objective

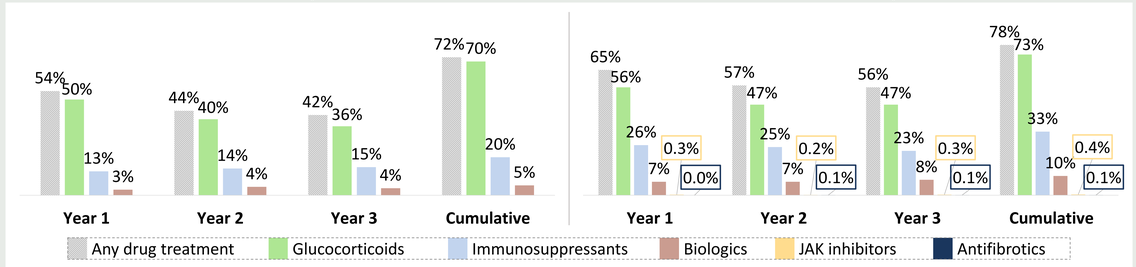
- Evaluate **treatments used in real-world clinical management** for pulmonary sarcoidosis patients with parenchymal involvement in the US

Methods

- Pulmonary sarcoidosis patients with parenchymal involvement were **identified using ICD-10 diagnosis code for sarcoidosis of the lung without (D86.0) or with (D86.2) lymph involvement** in the July 2017 – June 2023 MarketScan Commercial Claims and Encounters database
  - For each patient, the service date of the **first identified claim in July 2019 – June 2020** with one of these diagnosis codes **was defined as the index date**
  - Patients **without a lung sarcoidosis diagnosis** for at least 2 years prior to index were considered the **incident subgroup**
  - Patients with a lung sarcoidosis within 2 years prior to index were the non-incident subgroup
- **Use rates among treatments** for pulmonary sarcoidosis management were assessed in **medical and pharmacy claims for three years** following index
  - Drug classes evaluated were glucocorticoids, immunosuppressants, biologics, repository corticotrophin injections, JAK inhibitors, anti-fibrotics
  - **Glucocorticoid use was further distinguished by route of administration** (ROA): oral, intravenous, subcutaneous, intra-arterial, intramuscular, inhaled, sublingual
  - Each drug class, and the glucocorticoids by ROA, were considered different lines of treatment
  - In combination regimens, drug classes and glucocorticoids by ROA were assessed separately

Results

Figure 1: Proportion of PS patients on each treatment class, by year and cumulatively for 3 years



- Of 1,166 pulmonary sarcoidosis patients with parenchymal lung involvement identified, 136 were incident and 1,030 non-incident
- **Over half (54%) of incident patients required treatment** within the first year following diagnosis; of these, **92% used glucocorticoids** (Figure 1A)
  - **72% of patients required treatment within three years of diagnosis**, with **97% of those receiving glucocorticoids**
- In the non-incident patient population, **over 56% of patients required treatment** in a given year, with the **3-year rate rising to 78%** (Figure 1B)
  - **One-third of non-incident patients required immunosuppressants**, and **one in 10 required biologics** in a three-year period

Figure 2: Distribution of treatment type within each treatment line among incident patients

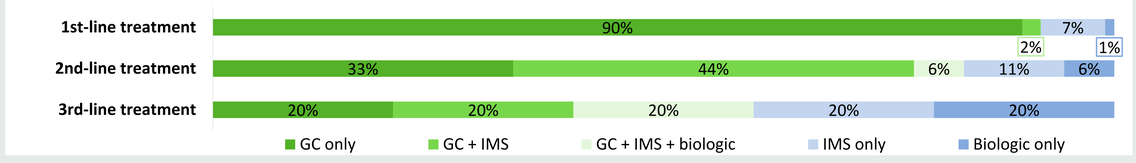
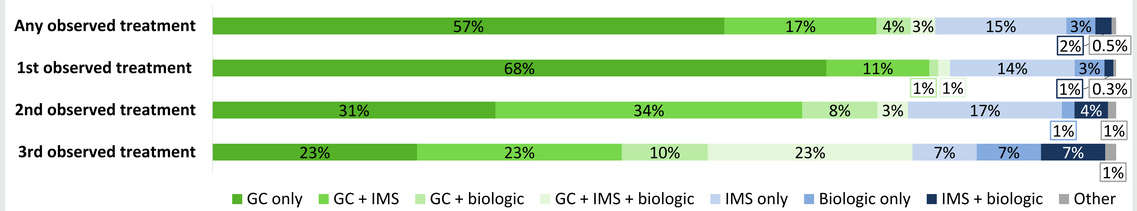


Figure 3: Distribution of treatment type within each treatment line among non-incident patients



- **Glucocorticoids are a mainstay of first-line treatment**, and only 8% of patients do not use glucocorticoids as their initial treatment type (Figure 2 and 3)
- Of incident patients treated with immunosuppressants or biologics in their second-line, **75% required continued use of glucocorticoids**
- The second-observed treatment for **non-incident patients frequently involved immunosuppressants (58%)** whether alone or with other therapies, and **64% of those were in combination with glucocorticoids**

Results *(cont.)*

Figure 4: Percentage of incident patients by number of treatment lines

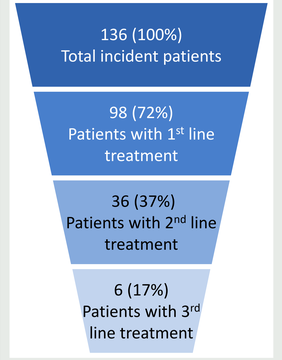
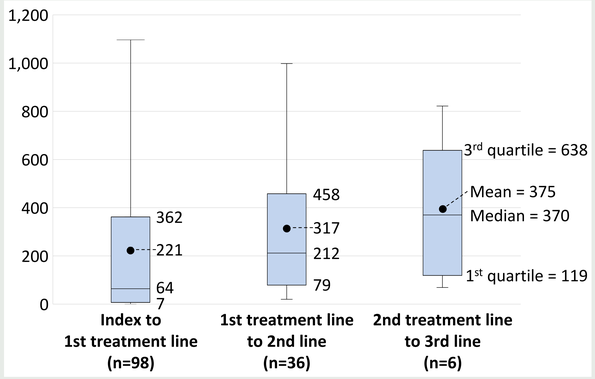


Figure 5: Days between lines of treatment among incident patients



- Over **one-third (37%) of treated incident patients required escalation beyond first-line therapy** in the first three years following diagnosis (Figure 4)
- Patients who **start treatment do so quickly**; the median time to treatment initiation was ~2 months following their incident diagnosis (Figure 5)
  - Of incident patients **escalating to second-line treatment**, most do so **within 7 months** (212 days) after starting their first-line treatment
  - Most patients **escalating to third-line treatment** do so **within one year (370 days)** following the start of their second-line treatment

Conclusions

- Glucocorticoids remain the **most common treatment for patients with pulmonary sarcoidosis** with parenchymal involvement, with higher rates of treatment than previously reported for US populations
- The **majority of patients using advanced therapies** in their second line of treatment also **have to maintain use of glucocorticoids**, emphasizing the **inability to taper glucocorticoids despite known safety risks**
- Patients who require later-line therapies tend to **accelerate through treatments quickly**, even among newly incident patients, suggesting that first-line **glucocorticoid treatment is insufficient or unsustainable**
- Rates of overall treatment and of **later-line immunosuppressant and biologic treatments** are even **higher among non-incident patients**, demonstrating **escalating treatment needs over time despite continued widespread use of glucocorticoids**

Disclosures

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