BACKGROUND

- Atopic dermatitis (AD) is a chronic inflammatory skin condition associated with dysfunction of the immune system.
- Patients with AD may be at an increased risk for a range of malignancies, including lymphoma.
- Real-world data characterizing malignancy risk among patients with AD remain limited.

METHODS

Study Design and Treatment

- This retrospective observational claims-based study utilized the Optum Clinformatics Data Mart (Figure 1).
- Patients with atopic dermatitis 18 years of age or older with a diagnosis of AD in an inpatient or outpatient setting (I47) were identified during the study period (March 2017–December 2019).
- Patients were excluded from tracing if they received equivalent for AD or advanced systemic therapy for RA at any time during the follow-up period.

RESULTS

- Patients with AD matched cohort included 202,271 patients, and the non-AD matched cohort for moderate-to-severe disease included 71,874 patients (Table 1).

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>AD Cohort</th>
<th>Matched Non-AD Cohort</th>
<th>Matched Non-AD Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yr) median (IQR)</td>
<td>50 (39-67)</td>
<td>50 (39-67)</td>
<td>50 (39-67)</td>
</tr>
</tbody>
</table>

OBJECTIVE

To evaluate the risk of malignancy (excluding nonmelanoma skin cancer [NMSC]) in patients with atopic dermatitis compared with patients without atopic dermatitis, patients with rheumatoid arthritis, and patients with moderate-to-severe disease.

CONCLUSIONS

Patients with atopic dermatitis demonstrated a lower risk of malignancy (excluding NMSC) in patients with atopic dermatitis compared with patients without atopic dermatitis, patients with rheumatoid arthritis, and patients with moderate-to-severe disease.

There was no difference in risk of malignancy (excluding NMSC) between patients with moderate-to-severe atopic dermatitis and those with moderate-to-severe rheumatoid arthritis.

Risk of malignancy (excluding NMSC) was also lower in patients with moderate-to-severe atopic dermatitis vs patients with moderate-to-severe rheumatoid arthritis.


doi: 10.1001/jama.2024.9824

References


Figure 1. Study Design

- AD cohort inclusion criteria:
  - ≥1 day of continuous healthcare plan enrollment after the cohort entry date.
  - AD diagnosis based on:
    - ≥1 claim for eczema or rash and other nonspecific skin condition within 30 days of the cohort entry date.
    - ≥2 claims for eczema or rash and other nonspecific skin condition within 30 days of the cohort entry date.
  - At least 90 days of continuous healthcare plan enrollment after the cohort entry date.

- RA cohort eligibility criteria:
  - ≥1 day of continuous healthcare plan enrollment after the cohort entry date.
  - RA diagnosis based on:
    - ≥2 claims for RA within 120 days of the cohort entry date.
    - ≥1 claim for a rheumatology code outside of the diagnostic code for RA.
  - At least 90 days of continuous healthcare plan enrollment after the cohort entry date.

- Matched cohort:
  - ≥1 day of continuous healthcare plan enrollment after the cohort entry date.
  - No significant difference in the baseline risk for malignancies (excluding NMSC) between patients with moderate-to-severe AD and moderate-to-severe RA (P > 0.2).

Figure 2. Patient Selection

- AD cohort:
  - 381,221 patients with AD (349,460 with moderate-to-severe AD) (N = 381,221)

- RA cohort:
  - 97,445 patients with RA (90,368 with moderate-to-severe RA) (N = 97,445)

- Matched cohort:
  - 71,341 non-AD matched controls (62,989 with moderate-to-severe AD) (N = 71,341)

Figure 3. Incidence Rate of Malignancy (Excluding NMSC)

- Patients with AD were matched 1:1 with non-AD controls based on age at 1 year, sex, and the cohort entry date.

Figure 4. Relative Risk of Malignancy (Excluding NMSC) in Patients With AD, RA, and Non-AD Matched Controls

- Significant risk of malignancy (excluding NMSC) was observed for patients with AD vs non-AD matched controls (P < 0.01) and for patients with RA vs their non-AD matched controls (P < 0.01).

Figure 5. Relative Risk of Malignancy (Excluding NMSC) in Patients With RA Based on Baseline Demographic and Clinical Characteristics

- RA cohort:
  - 97,445 patients with RA (90,368 with moderate-to-severe RA) (N = 97,445)

- Higher Risk of Malignancy (Excluding NMSC)
  - RA vs non-RA (P < 0.001)
  - AD vs non-AD (P < 0.001)
  - AD vs RA (P < 0.001)

- Among patients with AD, the risk of malignancy (excluding NMSC) was significantly greater among patients who were female, Asian or Hispanic in race, and those with a history of smoking, diabetes mellitus, hypertension, or prior cardiovascular disease (P < 0.01).

- The risk of malignancies (excluding NMSC) was significantly lower in patients who were female, Asian or Hispanic in race, and those with a history of diabetes.