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*Funding sources: This study was funded by The Natural Science Foundation of Fujian (No. 2023J01618).*

*Patient consent: Consent for the publication of recognizable patient photographs or other identifiable material was obtained by the authors and included at the time of article submission to the journal stating that all patients gave consent with the understanding that this information may be publicly available.*

*IRB approval status: The studies involving human subjects were approved by Ethics Committee of the First Affiliated Hospital of Fujian Medical University, MTCA, ECFAH of FMU [2015]084 -2.*

*Key words: clinical features; dose; efficacy; keloid; superficial radiotherapy; surgery.*

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#### Conflicts of interest

None disclosed.

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<https://doi.org/10.1016/j.jaad.2025.10.118>

### International multicenter case series of gestational dupilumab exposure in the treatment of atopic dermatitis: Maternal complications and fetal outcomes



Atopic dermatitis (AD) is a chronic inflammatory skin condition driven by type 2 inflammation that is common in women of childbearing potential (WOCBP).<sup>1</sup> During pregnancy, the upregulation of interleukin (IL) 4 is associated with both increased incidence and exacerbation of the disease.<sup>1</sup> A retrospective study of 251 pregnant patients identified that, in 80% of cases, women experienced their first presentation of adult-onset AD during pregnancy.<sup>1</sup>

Dupilumab is a monoclonal antibody that inhibits the actions of IL-4 and IL-13 and is approved for moderate-to-severe AD. Since it is less immunosuppressive than other previously available systemic therapies, dupilumab is used in WOCBP. However, current research regarding safety during pregnancy is limited to published case reports, small case series, and expert opinion.

We collected 85 cases via spontaneous reporting from providers practicing in 18 countries\* to report the maternal complications and fetal outcomes of gestational dupilumab usage in dermatitis in pregnancy (Table 1). This study focused on birth outcomes, meaning that elective terminations were excluded to eliminate potential confounders of termination. Data reported includes maternal age at conception, period of exposure, dose, birthweight, fetal size throughout gestation, congenital malformations, birth outcomes, and the incidence of pre-eclampsia, gestational diabetes, and gestational hypertension (Supplementary Table I, available via Mendeley at <https://data.mendeley.com/datasets/nc65f33r5p/1>).

Birth outcomes were reported as live births (85.9%), spontaneous abortions (9.4%), and still births (4.7%) (Fig 1). There were 2 reported congenital malformations (2.4%), 1 case of a narrowed pulmonary artery and 1 case of dilated kidneys which required no treatment, which is lower than the Center of Disease Control's reported rate of 3% in the general population. The results from our sample set are in concordance with other research including a 2025 systematic review of 115 patients which reported a 78.8% rate of live births (95% confidence

\*Countries which contributed cases include Italy, United Kingdom, Israel, Netherlands, Denmark, United States of America, Australia, Portugal, Austria, Argentina, Switzerland, Hungary, France, Turkey, Spain, Brazil, Ireland, and Taiwan.

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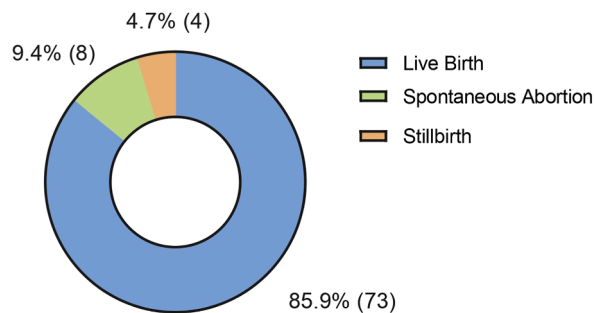
**Table I.** Characteristics and outcomes of our sample population

Patient demographics	
Attribute	Results
Median age at conception	32 y (SD: 5.4)
Atopic dermatitis	81 (95.3%)
Polymorphous eruption of pregnancy	4 (4.7%)
Attribute	n (%)
<b>Exposure</b>	
Trimester of exposure	
First trimester	76 (89.4)
Second trimester	47 (55.3)
Third trimester	43 (50.6)
Exposure dosage	
300 mg Q2W	72 (86.9)
>300 mg Q2W	5 (8.3)
<300 mg Q2W	4 (4.8)
<b>Maternal outcomes</b>	
Complications	
Gestational diabetes	1 (1.2)
Gestational hypertension	4 (4.7)
Pre-eclampsia	1 (1.2)
Method of birth	
Vaginal	46 (68.7)
Cesarean	21 (31.3)
<b>Fetal outcomes</b>	
Birth outcome	
Live birth	73 (85.9)
Spontaneous abortion	8 (9.4)
Stillbirth	4 (4.7)
Gestational development	
Small for gestational age	5 (5.9)
Large for gestational age	2 (2.4)
Congenital malformations	
Narrowed pulmonary artery	1 (1.2)
Dilated kidneys (no treatment required)	1 (1.2)

Q2W, Every 2 weeks; SD, standard deviation.

interval: 55.3% to 95.0%), 18.9% rate of miscarriages (95% confidence interval: 5.3% to 38.2%), and 0% rate of congenital malformations.<sup>2</sup> Given approximately 65% of pregnancies result in a live birth, our results and the current published literature support that dupilumab does not negatively affect birth outcomes.<sup>3</sup>

Our data demonstrated 1 case of gestational diabetes (1.2%), 4 cases of gestational hypertension (4.7%), and 1 case of pre-eclampsia (1.2%). There was 1 case of mild cholestasis of pregnancy with elevated liver function tests and creatinine, leading to an induction at 38 weeks. A retrospective study of 5896 pregnant women found that the prevalence of gestational diabetes was 3.8% and hypertension was 4.5%.<sup>4</sup> Additionally, a propensity score–matched cohort study of 293 pregnant women published in



**Fig 1.** Birth outcomes of our sample population reported as live births, spontaneous abortions, and stillbirths. Note that a systematic review and meta-analysis on the use of dupilumab in AD reported a 78.8% rate of live births (95% confidence interval [CI]: 55.3% to 95.0%) and 18.9% rate of miscarriages (95% CI: 5.3% to 38.2%) in 115 patients.<sup>2</sup> In addition, the rate of congenital malformations is 3% in the general population according to the Center of Disease control, and the rate reported in this study was 2.4%. AD, Atopic dermatitis.

2025 determined that dupilumab usage was not associated with maternal adverse pregnancy outcomes.<sup>5</sup>

In terms of gestational development, 5 fetuses were classified as small for gestational age (5.9%) and 2 fetuses were classified as large for gestational age (2.4%). A retrospective study of 5896 healthy pregnant women found that 7.9% of fetuses were small for gestational age and 11.1% were large for gestational age.<sup>4</sup>

Our research supports the growing body of literature suggesting that dupilumab is a viable option for AD management in WOCBP. While our study is limited by its retrospective and uncontrolled case series design, the findings provide valuable real-world insight into maternal and fetal outcomes associated with dupilumab exposure.

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Dr Dulai and Author Murase are co-first authorship.

Funding sources: None.

Patient consent: Not applicable (IRB granted a waiver of consent).

IRB approval status: Exempt (Protocol #: IRI25-03, Allendale Investigational Review Board, exemption received March 5, 2025).

Key words: atopic dermatitis; biologics; dupilumab; fetal outcomes; pregnancy.

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#### Conflicts of interest

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<https://doi.org/10.1016/j.jaad.2025.10.123>

### Practice characteristics of Veterans Affairs-affiliated dermatologists in the United States: A national comparative study



The Department of Veterans Affairs (VA) is one of the largest integrated health care systems in the United States.<sup>1</sup> While aspects of care delivered by VA-affiliated dermatologists (VADs) have been studied,

to our knowledge, no national studies describe workforce characteristics and distribution of VAD, despite their essential role in caring for nearly 8 million enrolled veterans.<sup>1</sup> This study assessed the distribution and characteristics of VAD in the United States, as dermatologic needs of VA patients continue to grow.<sup>2</sup>

In April 2023, a cross-sectional review of all VAD was performed, using data from the VA Specialty Care Programs Office. Sociodemographic data were supplemented through the 2023 Medicare National File, a publicly available, regularly updated listing of actively practicing Medicare-enrolled clinicians. Primary practice location was verified via telephone calls. Mohs fellowship training status was verified through American College of Mohs Surgery membership, supplemented with recent fellowship graduates and Micrographic Dermatologic Surgery certified physicians.

Seven hundred eight VAD and 12,440 non-VAD were identified with varying state density (Fig 1). Compared to non-VAD, VAD more frequently had an M.D. vs D.O. degree (96.5% vs 91.6%,  $P < .0001$ ), an additional Ph.D. degree (11.2% vs 2.9%,  $P < .0001$ ), Mohs surgery fellowship (16.2% vs 11.5%,  $P < .0001$ ), or dermatopathology fellowship (6.6% vs 3.7%,  $P < .0001$ ). VAD had fewer associated dermatologists within the group (12.1 vs 18.9,  $P < .0001$ ) and were in metropolitan counties more frequently (97.6% vs 94.5%,  $P < .0001$ ) (Table I).

These data are consistent with the general dermatologist workforce, with most practicing near cities and academic centers.<sup>3</sup> Higher rates of fellowship training among VAD likely reflect academic affiliations. A higher density of dermatologists is associated with improved patient outcomes and a lower melanoma mortality rate. Four dermatologists per 100,000 patients has been considered the threshold for adequate access.<sup>3</sup> Over half of states fall below this threshold for VAD with some states, including Wyoming, Nevada, Kansas, and Hawaii, having less than 1.0 dermatologist per 100,000 veterans. Veterans are at a greater risk of skin cancer, and nearly 5 million are rurally located, facing economic constraints and travel times impeding access.<sup>2,4</sup> Understanding VAD distribution guides resource allocation, targeted recruitment, and policy to strengthen the VAD workforce in low-access states and rural areas, closing access gaps. The Veteran's Choice Program expanded access by allowing veterans to receive care from providers outside the VA system,<sup>4</sup> but its effectiveness in meeting dermatologic needs remains uncertain. Recent data show dermatologic procedures were significantly more frequent in VA-purchased care, raising concerns of