

## Background

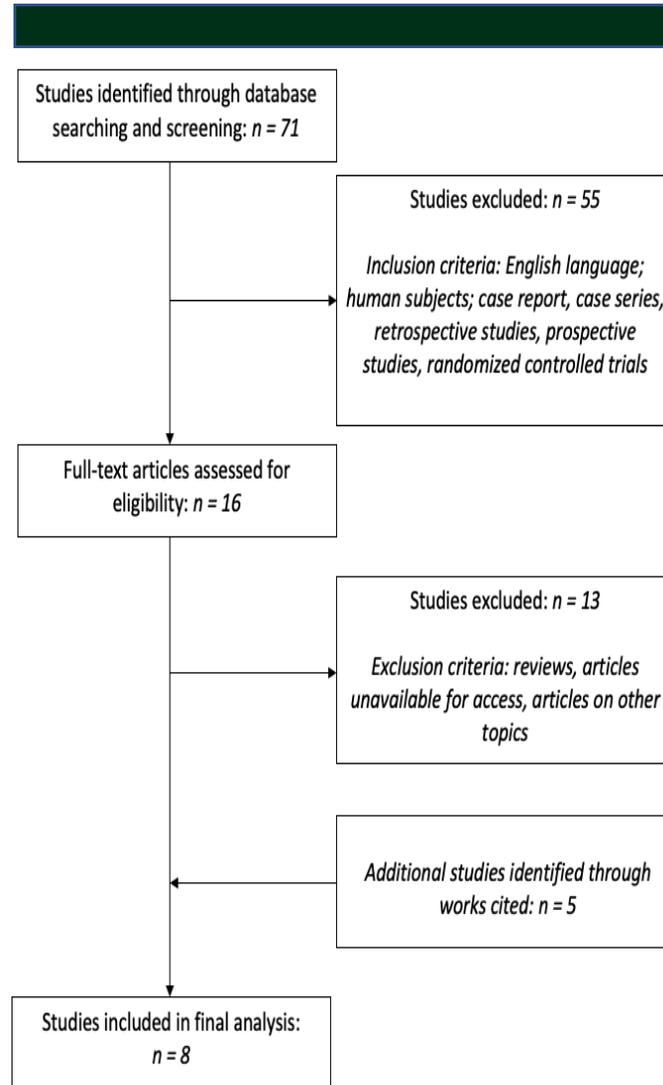
- Phototherapy is a standard treatment for moderate-to-severe psoriasis.
- UV light has phototoxic and oncogenic properties, the cutaneous carcinogenic risk of this treatment modality in psoriasis needs to be evaluated.

## Objective

- To analyze and categorize literature reporting cutaneous carcinogenic risk for patients with moderate to severe psoriasis treated with ultraviolet radiation phototherapy by Fitzpatrick skin phototypes.

## Methods

- In December 2020, we queried three databases, PubMed, Cochrane, and Embase for the following search terms: “Psoriasis” AND “UVB therapy” AND “skin” AND “cancer” OR “neoplasm” OR “melanoma”.
- English articles published in the last 10 years were included.
- Systematic reviews with or without meta-analysis, narrative reviews, and articles with irretrievable records were excluded.



## Results

- Out of eight studies included in the study, two were cross-sectional studies and six were retrospective studies.
- Majority (5/8) of the studies evaluated in our study did not report an increased risk of skin cancer in FSP phototypes II-VI.
- Three studies did report an increased risk of skin cancer in skin types I-VI.
- In patients with psoriasis and darker skin phototypes, a dose dependent increased cancer risk with PUVA and/or NB-UVB was noted in one report.
- Comorbid dermatology conditions other than psoriasis were reported 273 times, with vitiligo (182) being the most common condition and pityriasis lichenoides chronica (6) least commonly observed skin condition.
- 123 cases of actinic keratosis and 10 cases of solar lentiginos were found.

## Discussion

- Overall, due to contradictory evidence of studies evaluated, clinicians should make recommendations to patients on a case-by-case basis with respect to personal preference.
- Further long-term studies and randomized clinical trials regarding the phototherapy in treating patients with moderate-to-severe psoriasis by Fitzpatrick skin phototypes are needed to draw strong conclusions.

## Strengths/Limitations

- Study strengths include extensive search of three databases and uniquely reporting skin cancer risk based on skin phototypes.
- Study limitations include only a few studies investigating the relationship between phototherapy and cancer risk in psoriasis patients being published in the last ten years.

## Disclosure

Dr. Wu is or has been an investigator, consultant, or speaker for AbbVie, Almirall, Amgen, Arcutis, Aristeia Therapeutics, Boehringer Ingelheim, Bristol-Myers Squibb, Dermavant, Dr. Reddy's Laboratories, Eli Lilly, Galderma, Janssen, LEO Pharma, Mindera, Novartis, Regeneron, Sanofi Genzyme, Solius, Sun Pharmaceutical, UCB, Valeant Pharmaceuticals North America LLC, and Zerigo Health.