and Supplementary Table CLX, available via Mendeley at https://data.mendeley.com/datasets/z2bmdwwdf9/2).[152] Adding pneumatic broadband light to adapalene did not reduce acne lesion counts and was associated with risks of hyperpigmentation and purpura.[152] The 1726 nm laser was cleared by the FDA for acne treatment in 2022[299,300]; its evidence was not evaluated in the current guidelines due to lack of a RCT.

COMPLEMENTARY/ALTERNATIVE THERAPIES

Complementary and alternative therapies examined include botanical or plant-derived agents and vitamins. Available evidence is insufficient to develop a recommendation on the use of topical tea tree oil, topical green tea, topical witch hazel, oral pantothenic acid, oral or topical zinc, oral or topical niacinamide for acne treatment (Supplementary Tables CLXI-CLXXIII, available via Mendeley at https://data.mendeley.com/datasets/z2bmdwwdf9/2).

DIET

Available evidence is conflicting on low-glycemic-load diet for acne treatment (Supplementary Tables CLXXIV-CLXXVI, available via Mendeley at https://data.mendeley.com/datasets/z2bmdwwdf9/2). A greater reduction in facial acne score was seen in a low-glycemic-load diet versus a high-glycemic-load diet at 8 weeks in an RCT of 45 patients (MD in change from baseline, −0.3 [−0.39, −0.21]).[301] One RCT of 32 Korean patients showed improvement in the Leeds Revised Acne score at 12 weeks in a low-glycemic-load diet group, but not in control group.[247] A greater reduction in total lesion count was seen in a low-glycemic-load diet versus a high-glycemic-load diet at 12 weeks in an RCT of 43 Australian patients (MD in change from baseline, −8.1 [−14.89, −1.31])[302] However, in an RCT of 84 patients, the addition of a low-glycemic diet in patients starting BP 2.5% gel did not result in significant differences in acne lesion counts.[303] Available evidence is insufficient to develop a recommendation on the use of low dairy diet, low whey diet, omega-3 fatty acids, and chocolate on acne treatment.

GAPS IN RESEARCH AND STUDY LIMITATIONS

These guidelines identified important evidence gaps on the use of microbiology and endocrinology testing in acne, the use of systemic antibiotics beyond tetracycline-class antibiotics, physical modalities, complementary and alternative therapies, dietary interventions for the treatment of acne, and cost-effectiveness of acne treatments. RCT with long-term follow-up and comparative effectiveness research are necessary to examine and compare patient-centered acne treatment outcomes. Increased use of active comparator trials are needed when multiple interventions exist within a treatment class, such as among topical retinoids and topical antibiotics.[304,305] Additional research is needed on optimizing value of laboratory monitoring for patients receiving spironolactone and isotretinoin. A list of interventions and comparisons of interventions identified, evaluated, and not considered to be viable candidates for recommendation development due to insufficient evidence is available in Supplementary Table CLXXVII, available via Mendeley at https://data.mendeley.com/datasets/z2bmdwwdf9/2.

Tailoring acne management in diverse populations will require incorporation of diversity, equity, and inclusion efforts in the acne research pipeline. Women, patients of color, and sexual and gender minority patients may be disproportionately affected by acne.[21,306-308] Many acne RCT specify contraceptive requirements and exclusion criteria related to hormone therapy.[309] To optimize acne care in patients with pregnancy potential and LGBTQ + patients, future acne research should incorporate ongoing national efforts to collect high-quality information about sex, gender identity, and sexual orientation and to examine real-life acne treatment effects by including patients with variations in contraceptive use and hormone therapy status.[309-311] Additional research on the safety and efficacy of acne treatments in the context of pregnancy and lactation are required.[174,312]

Patients with skin of color may disproportionately suffer from acne sequelae, including acne-induced hyperpigmentation and keloidal scarring, which may be under-appreciated or undertreated by clinicians.[307] A systematic review of the treatments of acne-associated hyperpigmentation and scarring fall beyond the scope of these guidelines but is an area of important work. In addition to early treatment of acne, common treatments for acne-induced hyperpigmentation include topical retinoids, azelaic acid, hydroquinone, and physical modalities such as lasers and chemical peels. Common treatments for keloidal scars include topical silicone, intralesional corticosteroids, or lasers. A recent systematic review of 55 studies on acne in skin of color was unable to draw firm conclusions to guide distinct decisions in acne practice in patients with skin of color.[307] Only 4 of 55 studies evaluated acne outcomes in Fitzpatrick skin types IV to VI. The lack of research representation was most notable among Black, African