Supplemental materials for

Scott AM, Stehlik P, Clark J, et al. Blue-light therapies for acne vulgaris: a systematic review and meta-analysis. *Ann Fam Med*. 2019;17(6):545-553.

Supplemental APPENDIX 1 – Search strategies

PubMed (via the National Library of Medicine) – run 05/03/2018
("Acne Vulgaris"[Mesh] OR Acne[tiab] OR Blackheads[tiab] OR Whiteheads[tiab] OR Pimples[tiab])
AND
("Phototherapy"[Mesh] OR "Blue light"[tiab] OR Phototherapy[tiab] OR Phototherapies[tiab] OR "Photoradiation therapy"[tiab] OR "Photoradiation Therapies"[tiab] OR "Light Therapy"[tiab] OR "Light Therapies"[tiab])
AND
(Randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR randomised[tiab] OR placebo[tiab] OR "drug therapy"[sh] OR randomly[tiab] OR trial[tiab] OR groups[tiab])
NOT
(Animals[Mesh] not (Animals[Mesh] and Humans[Mesh]))

Cochrane CENTRAL (via Wiley) – run 05/03/2018
([mh "Acne Vulgaris"] OR Acne:ti,ab OR Blackheads:ti,ab OR Whiteheads:ti,ab OR Pimples:ti,ab)
AND
([mh Phototherapy] OR "Blue light":ti,ab OR Phototherapy:ti,ab OR Phototherapies:ti,ab OR "Photoradiation therapy":ti,ab OR "Photoradiation Therapies":ti,ab OR "Light Therapy":ti,ab OR "Light Therapies":ti,ab)

Embase (via Elsevier) – run 05/03/2018
('Acne Vulgaris'/exp OR Acne:ti,ab OR Blackheads:ti,ab OR Whiteheads:ti,ab OR Pimples:ti,ab)
AND
('Phototherapy'/exp OR "Blue light":ti,ab OR Phototherapy:ti,ab OR Phototherapies:ti,ab OR "Photoradiation therapy":ti,ab OR "Photoradiation Therapies":ti,ab OR "Light Therapy":ti,ab OR "Light Therapies":ti,ab)
AND
(random* OR factorial OR crossover OR placebo OR blind OR blinded OR assign OR assigned OR allocate OR allocated OR 'crossover procedure'/exp OR 'double-blind procedure'/exp OR 'randomized controlled trial'/exp OR 'single-blind procedure'/exp NOT ('animal'/exp NOT ('animal'/exp AND 'human'/exp)))

CINAHL (via EBSCO) - run 05/03/2018
((MH "Acne Vulgaris+") OR TI Acne OR AB Acne OR TI Blackheads OR AB Blackheads OR TI Whiteheads OR AB Whiteheads OR TI Pimples OR AB Pimples)
AND
((MH "Phototherapy+") OR TI "Blue light" OR AB "Blue light" OR TI Phototherapy OR AB Phototherapy OR TI Phototherapies OR AB Phototherapies OR TI "Photoradiation therapy" OR AB "Photoradiation therapy" OR TI "Photoradiation Therapies" OR AB "Photoradiation

Therapies" OR TI "Light Therapy" OR AB "Light Therapy" OR TI "Light Therapies" OR AB "Light Therapies")
AND
((MH "Clinical Trials+") OR (MH "Quantitative Studies") OR TI placebo* OR AB placebo* OR (MH "Placebos") OR (MH "Random Assignment") OR TI random* OR AB random* OR TI ((singl* or doubl* or tripl* or trebl*) W1 (blind* or mask*)) OR AB ((singl* or doubl* or tripl* or trebl*) W1 (blind* or mask*)) OR TI clinic* trial* OR AB clinic* trial* OR PT clinical trial)

Web of Science Core Collection (via Clarivate Analytics) - run 05/03/2018
("Acne Vulgaris" OR Acne OR Blackheads OR Whiteheads OR Pimples)
AND
(Phototherapy OR "Blue light" OR Phototherapy OR Phototherapies OR "Photoradiation therapy" OR "Photoradiation Therapies" OR "Light Therapy" OR "Light Therapies")
((random* or placebo* or allocat* or crossover* or "cross over" or ((singl* or doubl*) NEAR/1 blind*) OR TI=(trial))

Clinical Trials.gov run on 07/08/2018
(Acne AND (Phototherapy OR light))

WHO International Clinical Trials Registry Platform (ICTRP) on 07/08/2018
Acne AND Phototherapy OR Acne AND Light

Supplemental APPENDIX – Tables of excluded studies

Supplemental Table 1: Reasons for exclusion of full-text studies identified from data-base searches

No.	Reference	Reason for exclusion
1	Akaraphanth, R., Kanjanawanitchkul, W., & Gritiyarangsan, P. (2007). Efficacy of ALA-PDT vs blue light in the treatment of acne. Photodermatol Photoimmunol Photomed, 23(5), 186-190. doi: 10.1111/j.1600-0781.2007.00303.x	Study type
2	Alba, M. N., Gerenutti, M., Yoshida, V. M., & Grotto, D. (2017). Clinical comparison of salicylic acid peel and LED-Laser phototherapy for the treatment of Acne vulgaris in teenagers. J Cosmet Laser Ther, 19(1), 49-53. doi: 10.1080/14764172.2016.1247961	Duplicate reference
3	Alexiades-Armenakas, M. (2006). Long-pulsed dye laser-mediated photodynamic therapy combined with topical therapy for mild to severe comedonal, inflammatory, or cystic acne. J Drugs Dermatol, 5(1), 45-55.	Study type
4	Anyachukwu, C. C., & Onyeso, O. K. K. (2014). Efficacy of adjunct (laser) therapy to topical agents among Southern Nigerian acne vulgaris patients. Acupuncture and Related Therapies, 2(4), 66-70. doi: 10.1016/j.arthe.2014.08.003	Intervention
5	Choi, Y. S., Suh, H. S., Yoon, M. Y., Min, S. U., Lee, D. H., & Suh, D. H. (2010). Intense pulsed light vs. pulsed-dye laser in the treatment of facial acne: a randomized split-face trial. J Eur Acad Dermatol Venereol, 24(7), 773-780. doi: 10.1111/j.1468-3083.2009.03525.x	Intervention
6	de Leeuw, J., van der Beek, N., Bjerring, P., & Neumann, H. A. (2010). Photodynamic therapy of acne vulgaris using 5-aminolevulinic acid 0.5% liposomal spray and intense pulsed light in combination with topical keratolytic agents. J Eur Acad Dermatol Venereol, 24(4), 460-469. doi: 10.1111/j.1468-3083.2009.03447.x	Study type
7	El-Latif, A. A., Hassan, F. A., Elshahed, A. R., Mohamed, A. G., & Elsaie, M. L. (2014). Intense pulsed light versus benzoyl peroxide 5% gel in treatment of acne vulgaris. Lasers Med Sci, 29(3), 1009-1015. doi: 10.1007/s10103-013-1440-0	Intervention
8	Faghihi, G., Vali, A., Asilian, A., Radan, M., Esteki, H., & Elahidoost, M. (2011). Comparative efficacy of filtered blue light (emitted from sunlight) and topical erythromycin solution in acne treatment: a randomized controlled clinical trial. Journal of Pakistan Association of Dermatologists, 21(3), 179-184. http://onlinelibrary.wiley.com/o/cochrane/clcentral/articles/532/CN-00893532/frame.html	Study type
9	Gold, M. H. (2008). 5-Aminolevulinic acid photodynamic therapy versus methyl aminolevulinate photodynamic therapy for inflammatory acne vulgaris. J Am Acad Dermatol, 58(2 Suppl), S60-62. doi: 10.1016/j.jaad.2006.09.021	Study type

10	Gold, M. H., Biron, J. A., & Sensing, W. (2014). Clinical and usability study to determine the safety and efficacy of the Silk'n Blue Device for the treatment of mild to moderate inflammatory acne vulgaris. J Cosmet Laser Ther, 16(3), 108-113. doi: 10.3109/14764172.2013.854638	Study type
11	Gold, M. H., Bradshaw, V. L., Boring, M. M., Bridges, T. M., Biron, J. A., & Carter, L. N. (2004). The use of a novel intense pulsed light and heat source and ALA-PDT in the treatment of moderate to severe inflammatory acne vulgaris. J Drugs Dermatol, 3(6 Suppl), S15-19.	Study type
12	Goldberg, D. J., & Russell, B. A. (2006). Combination blue (415 nm) and red (633 nm) LED phototherapy in the treatment of mild to severe acne vulgaris. J Cosmet Laser Ther, 8(2), 71-75. doi: 10.1080/14764170600735912	Study type
13	Goldman, M. P., & Boyce, S. M. (2003). A single-center study of aminolevulinic acid and 417 NM photodynamic therapy in the treatment of moderate to severe acne vulgaris. J Drugs Dermatol, 2(4), 393-396.	Study type
14	Gregory, A. N., Thornfeldt, C. R., Leibowitz, K. R., & Lane, M. (2004). A study on the use of a novel light and heat energy system to treat acne vulgaris. Cosmetic Dermatology, 17(5), 287-291+300.	Study type
15	Haedersdal, M., Togsverd-Bo, K., Wiegell, S. R., & Wulf, H. C. (2008). Long-pulsed dye laser versus long-pulsed dye laser-assisted photodynamic therapy for acne vulgaris: A randomized controlled trial. J Am Acad Dermatol, 58(3), 387-394. doi: 10.1016/j.jaad.2007.11.027	Intervention
16	Hong, J. S., Jung, J. Y., Yoon, J. Y., & Suh, D. H. (2013). Acne treatment by methyl aminolevulinate photodynamic therapy with red light vs. intense pulsed light. Int J Dermatol, 52(5), 614-619. doi: 10.1111/j.1365-4632.2012.05673.x	Intervention
17	Horfelt, C., Funk, J., Frohm-Nilsson, M., Wiegleb Edstrom, D., & Wennberg, A. M. (2006). Topical methyl aminolaevulinate photodynamic therapy for treatment of facial acne vulgaris: results of a randomized, controlled study. Br J Dermatol, 155(3), 608-613. doi: 10.1111/j.1365-2133.2006.07340.x	Intervention
18	Ianosi, S., Neagoe, D., Calbureanu, M., & Ianosi, G. (2013). Investigator-blind, placebo-controlled, randomized comparative study on combined vacuum and intense pulsed light versus intense pulsed light devices in both comedonal and papulopustular acne. J Cosmet Laser Ther, 15(5), 248-254. doi: 10.3109/14764172.2013.814464	Intervention
19	Kim, B. J., Lee, H. G., Woo, S. M., Youn, J. I., & Suh, D. H. (2009). Pilot study on photodynamic therapy for acne using indocyanine green and diode laser. J Dermatol, 36(1), 17-21. doi: 10.1111/j.1346-8138.2008.00580.x	Intervention
20	Kim, T. I., Ahn, H. J., Kang, I. H., Jeong, K. H., Kim, N. I., & Shin, M. K. (2017). Nonablative fractional laser-assisted daylight photodynamic therapy with topical methyl aminolevulinate for moderate to severe facial acne vulgaris: Results of a randomized and comparative study. Photodermatol Photoimmunol Photomed, 33(5), 253-259. doi: 10.1111/phpp.12312	Intervention

21	Ling, X., Chen, L., Ji, J., & Shi, X. (2010). Clinical comparative observation of red and blue LED light combination phototherapy in the treatment of medium and severe acne. Chinese Journal of Aesthetic Medicine, 12, 1835-1836.	Study type
22	Liu, G., Pan, C., Li, K., Tan, Y., & Wei, X. (2011). Phototherapy for mild to moderate acne vulgaris with portable blue and red LED. Journal of innovative optical health sciences, 04(01), 45-52.	Comparator
23	Liu, L. H., Fan, X., An, Y. X., Zhang, J., Wang, C. M., & Yang, R. Y. (2014). Randomized trial of three phototherapy methods for the treatment of acne vulgaris in Chinese patients. Photodermatol Photoimmunol Photomed, 30(5), 246-253. doi: 10.1111/phpp.12098	Comparator
24	Melnick, S. (2005). Cystic acne improved by photodynamic therapy with short-contact 5-aminolevulinic acid and sequential combination of intense pulsed light and blue light activation. J Drugs Dermatol, 4(6), 742-745.	Study type
25	Morton, C. A., Scholefield, R. D., Whitehurst, C., & Birch, J. (2005). An open study to determine the efficacy of blue light in the treatment of mild to moderate acne. J Dermatolog Treat, 16(4), 219-223. doi: 10.1080/09546630500283664	Study type
26	Nikolis, A., Fauverghe, S., Scapagnini, G., Sotiriadis, D., Kontochristopoulos, G., Petridis, A., . . . Antoniou, C. (2018). An extension of a multicenter, randomized, split-face clinical trial evaluating the efficacy and safety of chromophore gel-assisted blue light phototherapy for the treatment of acne. Int J Dermatol, 57(1), 94-103. doi: 10.1111/ijd.13814	Study type
27	Oh, S. H., Ryu, D. J., Han, E. C., Lee, K. H., & Lee, J. H. (2009). A comparative study of topical 5-aminolevulinic acid incubation times in photodynamic therapy with intense pulsed light for the treatment of inflammatory acne. Dermatol Surg, 35(12), 1918-1926. doi: 10.1111/j.1524-4725.2009.01315.x	Intervention
28	Orringer, J. S., Sachs, D. L., Bailey, E., Kang, S., Hamilton, T., & Voorhees, J. J. (2010). Photodynamic therapy for acne vulgaris: a randomized, controlled, split-face clinical trial of topical aminolevulinic acid and pulsed dye laser therapy. J Cosmet Dermatol, 9(1), 28-34. doi: 10.1111/j.1473-2165.2010.00483.x	Intervention
29	Ou, Y., Liu, H. X., & Ji, Y. (2014). Clinical observation of electric light combined with Yinhua Decoction on moderate acne (Feiweiyunre Syndrome). Chinese Journal of Dermatovenereology, 28(12), 1279-1281.	Comparator
30	Ou, Y., Liu, H. X., & Ji, Y. (2014). Clinical observation of electric light combined with Yinhua Decoction on moderate acne (Feiweiyunre Syndrome). Chinese Journal of Dermatovenereology, 28(12), 1279-1281.	Duplicate
31	Park, K. Y., Kim, J. Y., Hyun, M. Y., Oh, W. J., Jeong, S. Y., Han, T. Y., . . . Kim, M. N. (2015). 1,213 Cases of Treatment of Facial Acne Using Indocyanine Green and Intense Pulsed Light in Asian Skin. Biomed Res Int, 2015, 596161. doi: 10.1155/2015/596161	Study type

32	Rojanamatin, J., & Choawawanich, P. (2006). Treatment of inflammatory facial acne vulgaris with intense pulsed light and short contact of topical 5-aminolevulinic acid: a pilot study. Dermatol Surg, 32(8), 991-996; discussion 996-997. doi: 10.1111/j.1524-4725.2006.32221.x	Study type
33	Sakamoto, F. H., Izikson, L., Lewis, W., Ferrick, B., Doukas, A., Farinelli, W. A., . . . Zurakowski, D. (2012). Preliminary results of a pilot prospective ramdomized double-blinded control study to compare a new inhibitory PDT method to conventional ALA-PDT for the treatment of recalcitrant moderate-severe acne. Lasers in Surgery and Medicine, 44, 8. doi: 10.1002/lsm.22023	No extractable data for blue/red light group
34	Sami, N. A., Attia, A. T., & Badawi, A. M. (2008). Phototherapy in the treatment of acne vulgaris. J Drugs Dermatol, 7(7), 627-632.	Comparator
35	Shaheen, B., & Gonzalez, M. L. (2011). Randomized, controlled, double-blind, clinical trial evaluating the mechanism of action, efficacies and safety of methylaminolaevulinate photodynamic therapy (PDT) and intense pulsed light, administered as placebo-PDT, compared with adapalene 0-1% gel in the treatment of adults with mild to moderate acne vulgaris. British Journal of Dermatology, 165, 103. doi: 10.1111/j.1365-2133.2011.10288.x	Intervention
36	Song, B. H., Lee, D. H., Kim, B. C., Ku, S. H., Park, E. J., Kwon, I. H., . . . Kim, K. J. (2014). Photodynamic therapy using chlorophyll-a in the treatment of acne vulgaris: a randomized, single-blind, split-face study. J Am Acad Dermatol, 71(4), 764-771. doi: 10.1016/j.jaad.2014.05.047	Comparator
37	Taub, A. F. (2004). Photodynamic therapy for the treatment of acne: a pilot study. J Drugs Dermatol, 3(6 Suppl), S10-14.	Study type
38	Taub, A. F. (2007). A comparison of intense pulsed light, combination radiofrequency and intense pulsed light, and blue light in photodynamic therapy for acne vulgaris. J Drugs Dermatol, 6(10), 1010-1016.	Comparator
39	Yao, Y., & Min, Z. (2009). Efficacy of phototherapy combined with traditional Chinese medicine on acne vulgaris. Chinese journal of dermatology, 42(3), 175-177.	Study type
40	Zhang, Y., Yang, L., Zhou, J.-Z., Song, Q.-H., Liu, B., Lei, Q., . . . Zhan, S.-H. (2009). Clinical study of Omnilux blue and red LED phototherapy in the treatment of acne. Chinese Journal of Dermatovenereology, (4), 218-219.	Study type
41	Zhang, Y.-H. (2013). The clinical efficacy of blue red LED phototherapy combined with jinhua xiaocuo pills and chloramphenicol tincture on the treatment of acne vulgaris. Chinese Journal of Dermatovenereology, 27(3), 304-305	Study type
42	Zhong, J.-Q., Xian, D.-H., & Chen, D.-Y. (2007). The clinical efficacy of narrowband blue light in the treatment of acne vulgaris. Journal of clinical dermatology, 36(2), 115-116.	Study type

Supplemental Table 2: Reasons for exclusion of full-text studies identified from forward/backward citation screen

No.	Reference	Reason for exclusion
1	Ashkenazi, H., Y. Harth, Z. Malik and Y. Nitzan (2000). "High-intensity narrow-band blue light eradicates propionibacterium acnes." Proceedings of the 24th annual meeting of the Israel society of dermatology. https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1468-3083.2000.tb01093.x	Study type
2	Harth, Y., M. Elman and A. R. Shalita (2001). "Acne phototherapy - 3 Center clinical study." The 60th Annual Meeting of the American Academy of Dermatology.	Comparator
3	Ammad, S., C. Edwards, M. Gonzalez and C. M. Mills (2002). "The effect of blue light phototherapy on mild to moderate acne." Br J Dermatol **147**(62 SUPPL.): 95.	Study type
4	Stillman, S., S. Geen, Y. Harth and A. R. Shalita (2000). "High intensity narrow band blue light is effective in the treatment of acne vulgaris - An in vitro and in vivo study." Proceedings of the 24th Annual Meeting of the Israel Society of Dermatology.	Comparator
5	De Arruda, L. H. F., V. Kodani, A. Bastos Filho and C. B. Mazzaro (2009). "A prospective, randomized, open comparative study to evaluate safety and efficacy of blue light treatment versus topical benzoyl peroxide 5% formulation in patients with acne grades II and III." Anais Brasileiros de Dermatologia **84**(5): 463-468.	Duplicate
6	Faghihi, G., A. Vali, N. S. Bank and E. Ahmadieh (2011). "The effect of phototherapy with blue light in treatment acne vulgaris in compare with conventional therapy with tetracycline." Journal of Isfahan Medical School **28**(123).	Study type
7	Kawada, A. (2007). "Acne phototherapy: A new evolution for the treatment of acne vulgaris." Expert Review of Dermatology **2**(1): 1-3.	Study type
8	Kawada, A., Y. Aragane, H. Kameyama, Y. Sangen and T. Tezuka (2002). "Acne phototherapy with a high-intensity, enhanced, narrow-band, blue light source: an open study and in vitro investigation." Journal of Dermatological Science **30**(2): 129-135.	Study type
9	Kim, S. (2008). "The dual treatment of acne vulgaris using two kinds of ELOS™ (electro optical synergy) system: A simultaneous split-face trial." Journal of Cosmetic and Laser Therapy **10**(4): 213-216.	Study type
10	Kwon, H. H., J. B. Lee, J. Y. Yoon, S. Y. Park, H. H. Ryu, B. M. Park, Y. J. Kim and D. H. Suh (2013). "The clinical and histological effect of home-use, combination blue red LED phototherapy for mild-to-moderate acne vulgaris in Korean patients: a double-blind, randomized controlled trial." British Journal of Dermatology **168**(5): 1088-1094.	Duplicate
11	Lee, S. Y., C. E. You and M. Y. Park (2007). "Blue and red light combination LED phototherapy for acne vulgaris in patients with skin phototype IV." Lasers in Surgery and Medicine **39**(2): 180-188.	Study type
12	Meffert, H., K. Gaunitz, T. Gutewort and U. J. Amlong (1990). "Therapy of	Study type

	acne with visible light. Decreased irradiation time by using a blue-light high-energy lamp." Dermatologische Monatsschrift **176**(10): 597-603.	
13	Omi, T., P. Bjerring, S. Sato, S. Kawana, R. W. Hankins and M. Honda (2004). "420 nm intense continuous light therapy for acne." Journal of Cosmetic and Laser Therapy **6**(3): 156-162.	Study type
14	Prieto, V. G., P. S. Zhang and N. S. Sadick (2005). "Evaluation of pulsed light and radiofrequency combined for the treatment of acne vulgaris with histologic analysis of facial skin biopsies." Journal of Cosmetic and Laser Therapy **7**(2): 63-68.	Study type
15	Sadick, N. (2009). "A study to determine the effect of combination blue (415 nm) and near-infrared (830 nm) light-emitting diode (LED) therapy for moderate acne vulgaris." Journal of Cosmetic and Laser Therapy **11**(2): 125-128.	Study type
16	Shalita, A. R., Y. Harth, M. Elman, M. Slatkine, G. Talpalariu, Y. Rosenberg, A. Korman and A. Klein (2001). Acne phototherapy using U.V free high intensity narrow band blue light - 3 center clinical study. Lasers in Surgery: Advanced Characterization Therapeutics, and Systems Xi. R. R. Anderson, K. E. Bartels, L. S. Bass et al. **4244:** 61-73.	Comparator
17	Sigurdsson, V., A. C. Knulst and H. vanWeelden (1997). "Phototherapy of acne vulgaris with visible light." Dermatology **194**(3): 256-260.	Comparator
18	Smith, R. E., B. L. Smith and N. W. Borgfeld (2017). An antimicrobial light device with clinical utility in the United States and abroad. 2017 IEEE Healthcare Innovations and Point of Care Technologies, HI-POCT 2017.	Study type

APPENDIX – Relevant clinical trials

Search of WHO.int and clinicaltrials.gov was performed on 7 August 2018. The search returned 85 results. The results were screened for relevance by two authors, independently, with discrepancies resolved by consensus. 3 trials were identified that were considered relevant to the present systematic review.

Supplemental Table 3: Relevant trials identified by search of WHO.int and clinicaltrials.gov

Trial registration no.	**Title**	**Interventions**
NCT02431494	Safety and Preliminary Efficacy of Combination Therapy for the Treatment of Acne Vulgaris	Blue light vs microcurrent vs Bluelight+microcurrent
NCT01689935	Reduced Side-Effects Of Photodynamic Therapy For The Treatment Of Moderate To Severe Acne (i-PDT)	5 arm study, including a blue light arm and a no treatment arm
NCT02698436	A Study to Evaluate the Effectiveness and Tolerance of Two Acne Treatments on Subjects With Mild to Moderate Acne.	Red-blue vs BPO2.5%

APPENDIX – Detailed characteristics of interventions

Supplemental Table 4: Detailed characteristics of Interventions

Study Information: **Author** **Location**	**Intervention:** **Type and wavelength** **Frequency & duration of exposure**	**Comparator:** **Type** **Frequency & duration of exposure**
Full publication available		
Gold 2011 United States	Blue light alone (414 nm) 2 sessions/day for 2 consecutive days	Sham device 2 sessions/day for 2 consecutive days
Antoniou 2016 Greece	Blue light alone (415/446nm) 2 times/week for 6 weeks	No treatment n/a, n/a
Tzung 2004 Taiwan	Blue light alone (420 +/-20 nm) 2 times/week for 4 weeks	No treatment n/a, n/a
Elman 2003 Israel	Blue light alone (405-420 nm) 2 times/week for 4 weeks	No treatment n/a, n/a
Gold 2005 United States	Blue light alone (417 +/- 5nm) 2x/week for 4 weeks	Topical 1% Clindamycin solution 2x/day, for 4 weeks
De Arruda 2009 Brazil	Blue light alone (407-420nm) 2x/week for 4 weeks	Benzoyl peroxide 5% cream 2x/day, for 4 weeks
Papageorgiou 2000 United Kingdom	(1) Blue light alone (415 +/- 20nm) (2) Blue/red light (415nm +20nm/-15nm; 660nm +/- 10nm) Daily, for 12 weeks	Benzoyl peroxide 5% NR, NR
Kwon 2013 Korea	Blue/red light (420nm and 660nm) 2x/day for 4 weeks	Sham device 2x/day for 4 weeks
Alba 2017 Brazil	Blue/red light (470+/- 10nm, 660 +/- 10nm) 1x/week for 10 weeks	Salicylic acid peel (10%) 1x/week for 10 weeks
Nestor 2016 United States	(1) Blue/red light (445nm, 630nm) + cleanser Light: 1x/day; Cleanser: 2x/day; for 12 weeks (2) Blue/red light (445nm, 630nm) + cleanser + acne control facial treatment (1% salicylic acid & retinol) Light: 1x/day; Cleanser: 2x/day; acne control facial treatment 1x/day;	Benzoyl peroxide 2.5% acne control lotion + cleanser Lotion: 2x/day; Cleanser: 2x/day; for 12 weeks
Ash 2015 United Kingdom	Blue light (414 nm) + pre and post-treatment cream (both cont. salicylic, glycolic and lactic acids) + post-treatment moisturiser (cont. niacin) Every 2nd day, 8 weeks	"Control" (details NR) NR
Conference abstract only		
Chu 1999 NR	(1) Blue light alone (415nm) (2) Blue/red light (415nm, 660nm) 1x/day, 12 weeks	Benzoyl peroxide 5% cream 2x/day, 12 weeks

Study Information: **Author** **Location**	**Intervention:** **Type and wavelength** **Frequency & duration of exposure**	**Comparator:** **Type** **Frequency & duration of exposure**
Miller 2017 NR	Blue/red light (details NR) 1x/day, duration NR	Benzoyl peroxide 2.5% topical 2x/day, duration NR
Ash 2013 United Kingdom	Blue light (414 nm) plus creams NR, NR	"control" (details NR) NR, NR