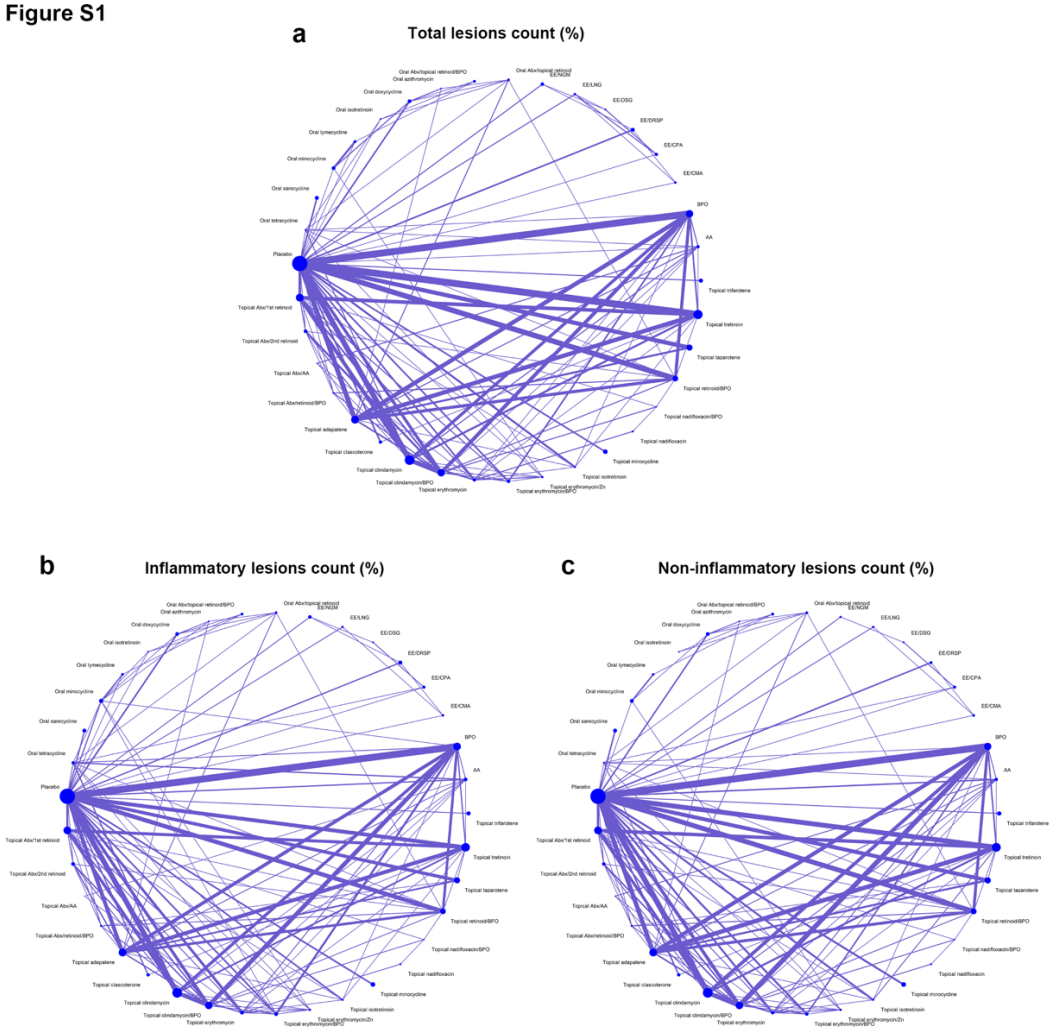
**Supplemental materials for:**

Huang C, Chang I, Bolick N, et al. Comparative efficacy of pharmacological treatments for acne vulgaris: a network meta-analysis of 221 randomized controlled trials. *Ann Fam Med*. 2023;21(4):358-369.

## Supplemental Figure 1. Network diagrams of the percentage reduction in lesions count.

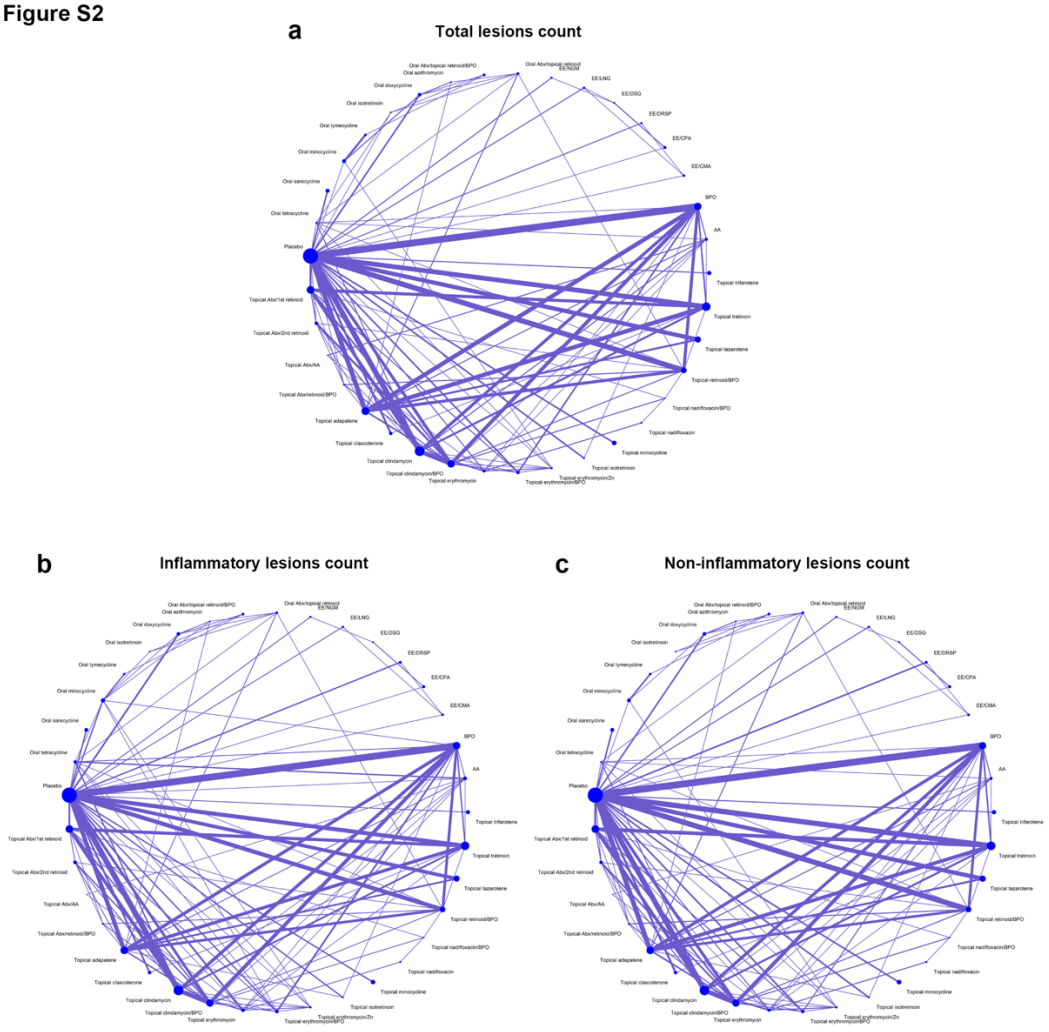
Figure S1




**(a)** Total lesions count, **(b)** inflammatory lesions count, and **(c)** non-inflammatory lesions count. The size of each circle is proportional to the number of randomly assigned patients and the width of the lines corresponds to the number of trials.

**Supplemental Figure 2. Network diagrams of the absolute reduction in lesions count.**

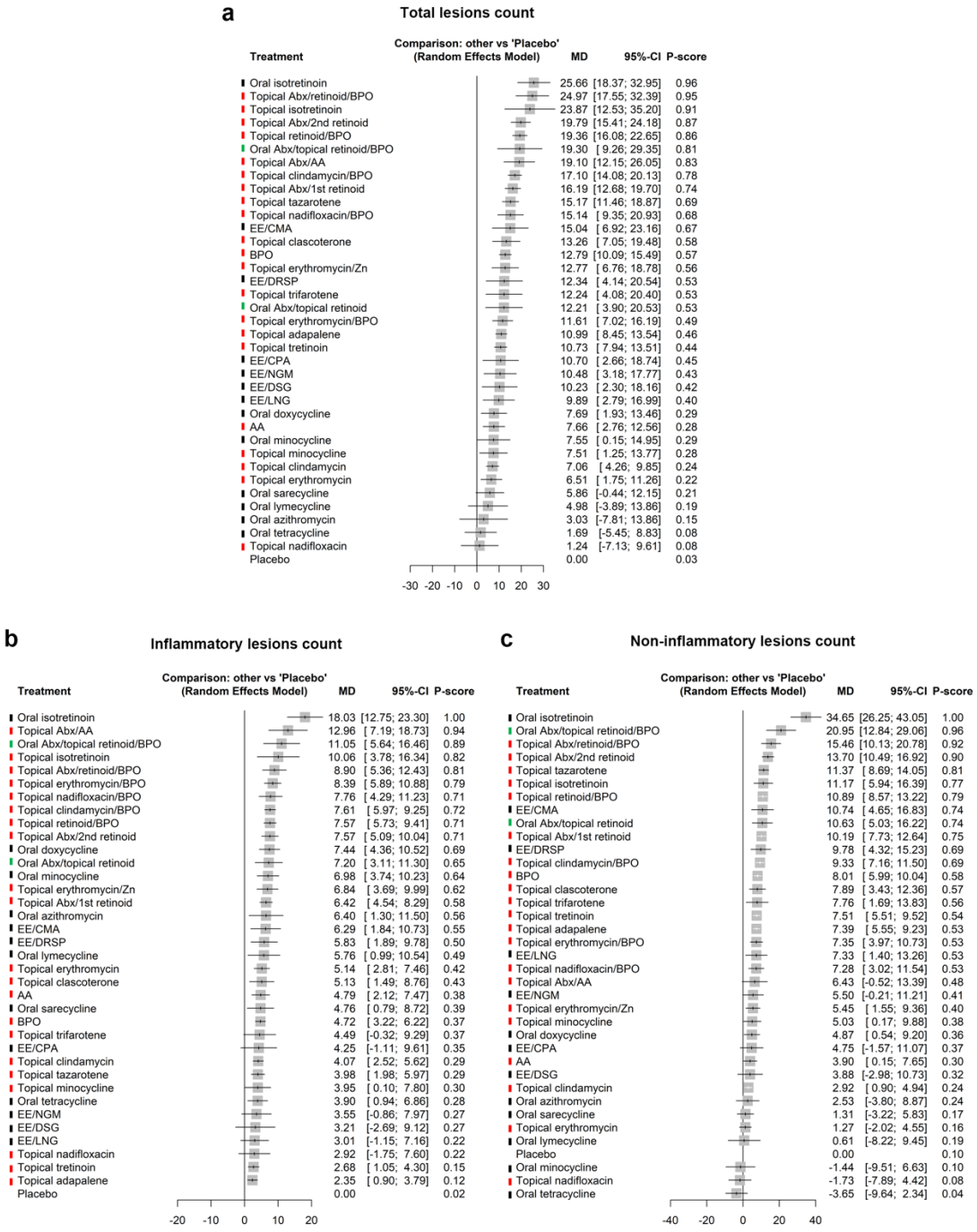
Figure S2




**(a)** Total lesions count, **(b)** inflammatory lesions count, and **(c)** non-inflammatory lesions count. The size of each circle is proportional to the number of randomly assigned patients and the width of the lines corresponds to the number of trials.

**Supplemental Figure 3. Estimates of the absolute reduction in lesions count for different treatments compared with placebo.**

**Figure S3**

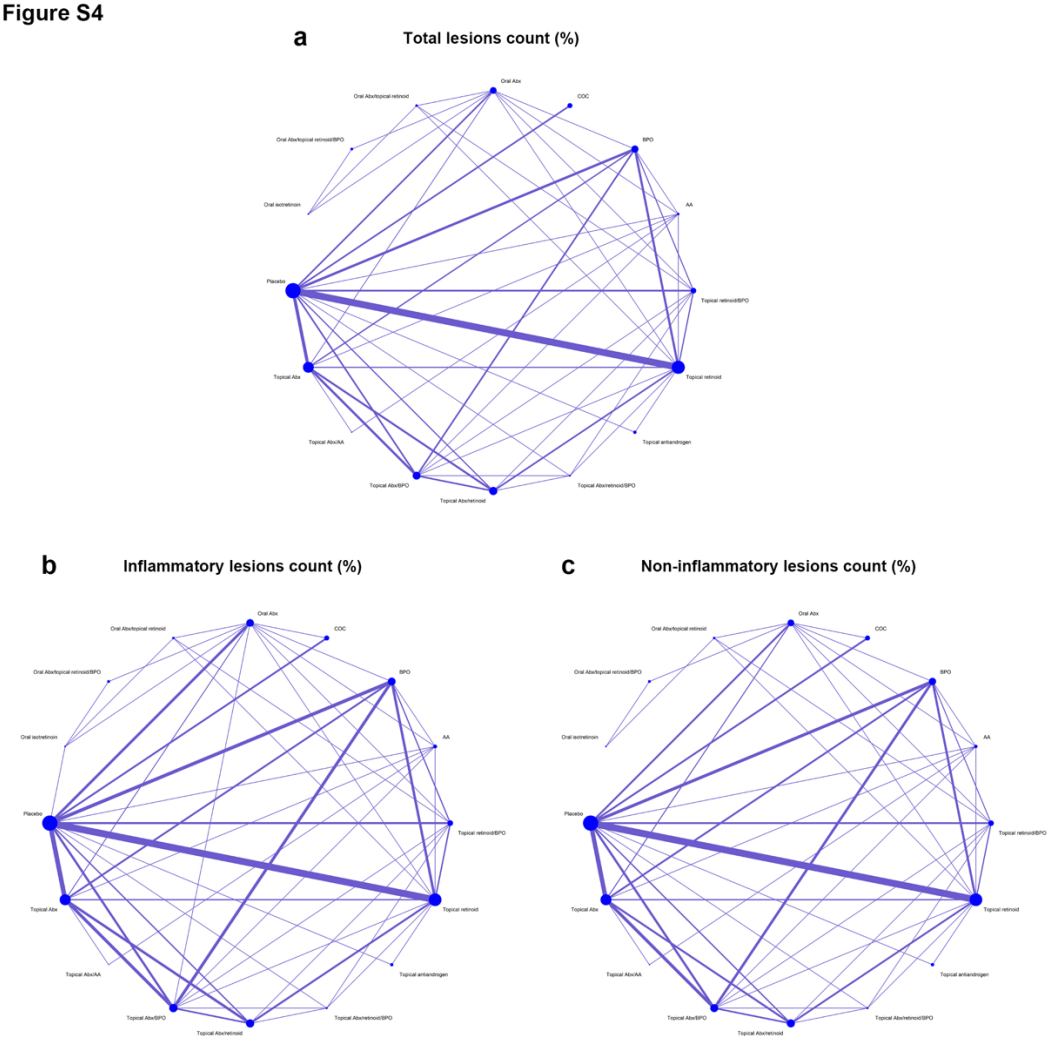



Forest plots of mean difference (MD) and 95% confidence interval (CI) in absolute reduction in

**(a)** total lesions count, **(b)** inflammatory lesions count, and **(c)** non-inflammatory lesions compared with placebo. Black: oral treatments; red: topical treatments; green: combined oral and topical treatments.

**Supplemental Figure 4. Network diagrams of the percentage reduction in lesions count with simplified treatment nodes.**

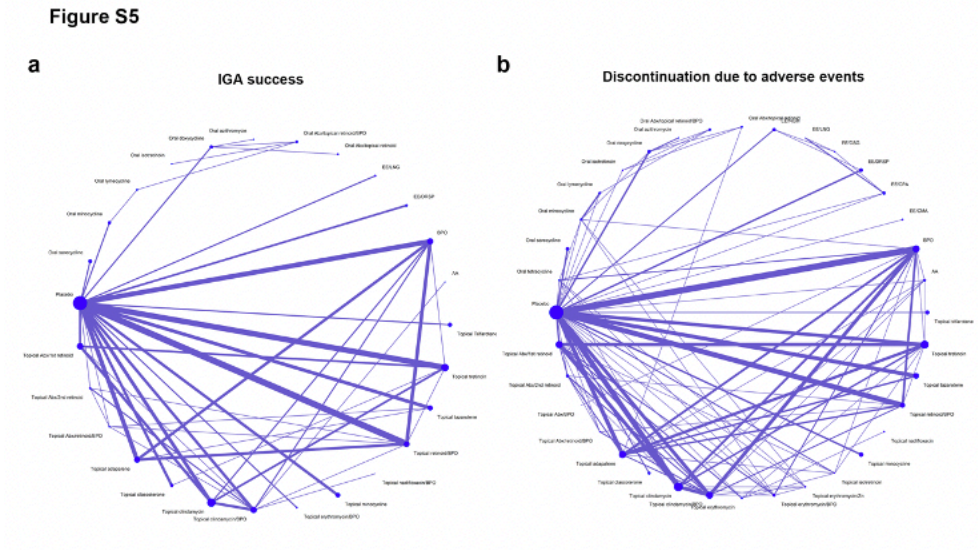
Figure S4




**(a)** Total lesions count, **(b)** inflammatory lesions count, and **(c)** non-inflammatory lesions count. The size of each circle is proportional to the number of randomly assigned patients and the

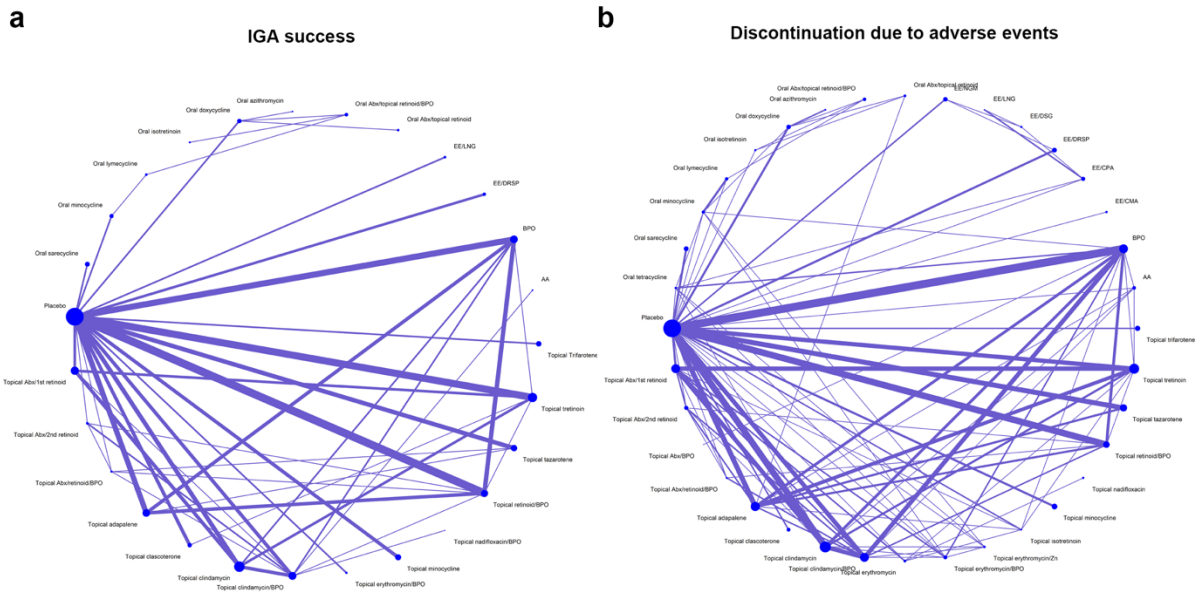
width of the lines corresponds to the number of trials.

**Supplemental Figure 5. Network diagrams of the treatment success and adverse events.**

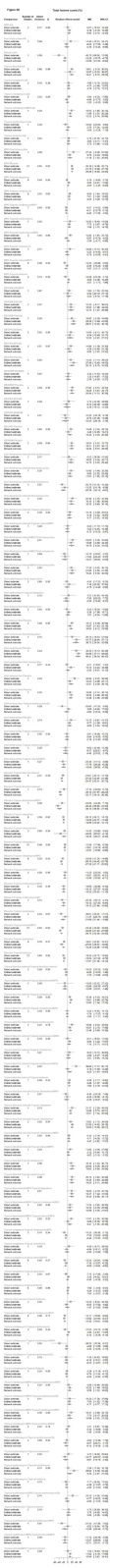



**(a)** treatment success measured by Investigator's Global Assessment (IGA), and **(b)** discontinuation due to adverse events. The size of each circle is proportional to the number of randomly assigned patients and the width of the lines corresponds to the number of trials.

## Figure S5


a
IGA success
Oral azithromycin
Oral doxycycline
Oral Abx/topical retinoid/BPO
Oral Abx/topical retinoid
Oral isotretinoin
EE/LNG
Oral lymecycline
EE/DRSP
Oral minocycline
BPO
Oral sarecycline
AA
Placebo
Topical Trifarotene
Topical Abx/1st retinoid
Topical tretinoin
Topical Abx/2nd retinoid
Topical tazarotene
Topical Abx/retinoid/BPO
Topical retinoid/BPO
Topical adapalene
Topical nadifloxacin/BPO
Topical clascoterone
Topical minocycline
Topical clindamycin
Topical clindamycin/BPO
Topical erythromycin/BPO
b
Discontinuation due to adverse events
Oral Abx/topical retinoid/BPO
Oral azithromycin
Oral Abx/topical retinoid
EE/NOMI
EE/LNG
Oral doxycycline
EE/DSG
Oral isotretinoin
EE/DRSP
Oral lymecycline
EE/CPA
Oral minocycline
EE/CMA
Oral sarecycline
BPO
Oral tetracycline
AA
Placebo
Topical trifarotene
Topical Abx/1st retinoid
Topical tretinoin
Topical Abx/2nd retinoid
Topical tazarotene
Topical Abx/BPO
Topical retinoid/BPO
Topical Abx/retinoid/BPO
Topical nadifloxacin
Topical adapalene
Topical minocycline
Topical clascoterone
Topical isotretinoin
Topical clindamycin
Topical erythromycin/Zn
Topical clindamycin/BPO
Topical erythromycin
Topical erythromycin/BPO

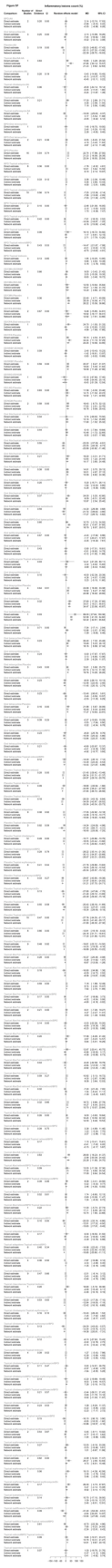
**Supplemental Figure 6. Node-splitting analyses of inconsistency in the network of percentage reduction in total lesions count.**



The direct, indirect and network estimates of each

treatment comparison, along with the weight of direct estimate.

**Supplemental Figure 7. Node-splitting analyses of inconsistency in the network of percentage reduction in inflammatory lesions count.**

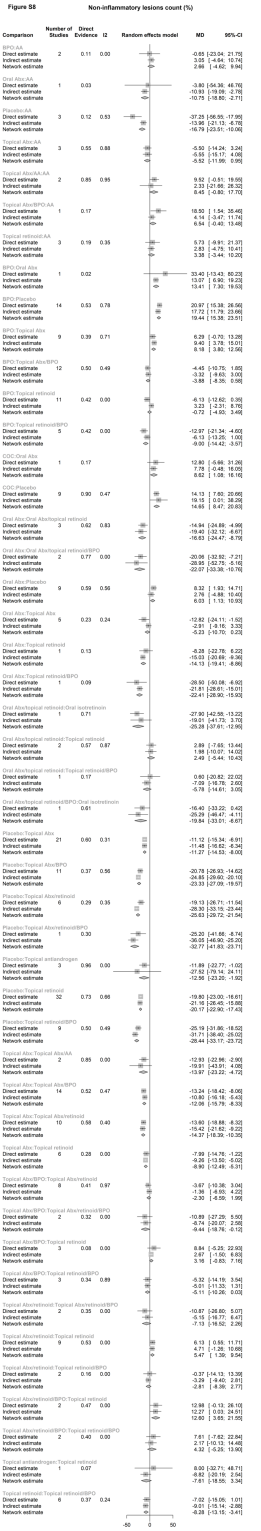


The direct, indirect and network estimates of each treatment

comparison, along with the weight of direct estimate.

**Supplemental Figure 8. Node-splitting analyses of inconsistency in the network of percentage reduction in non-inflammatory lesions count.**

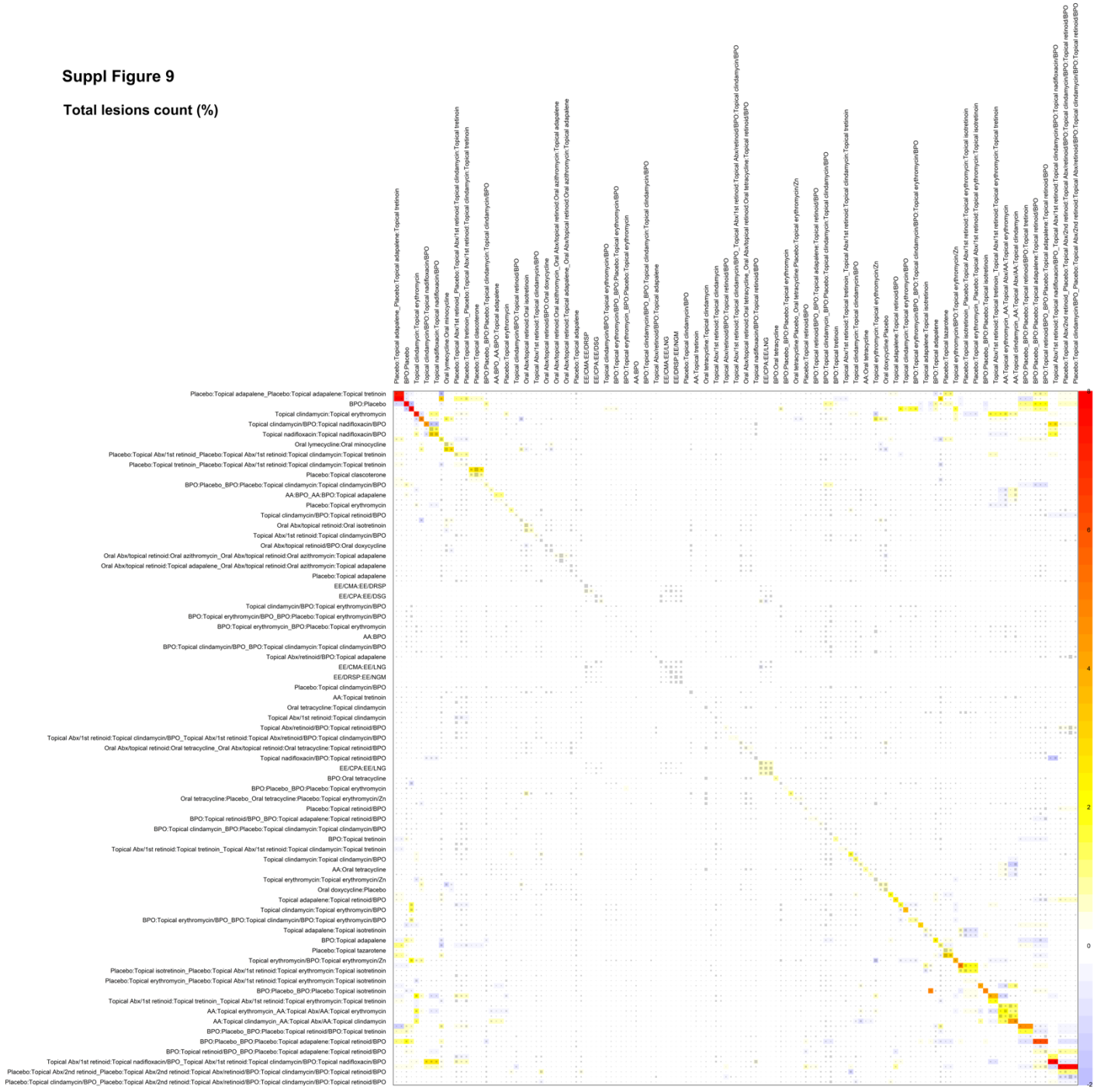
**Figure S8**




The direct, indirect

and network estimates of each treatment comparison, along with the weight of direct estimate.

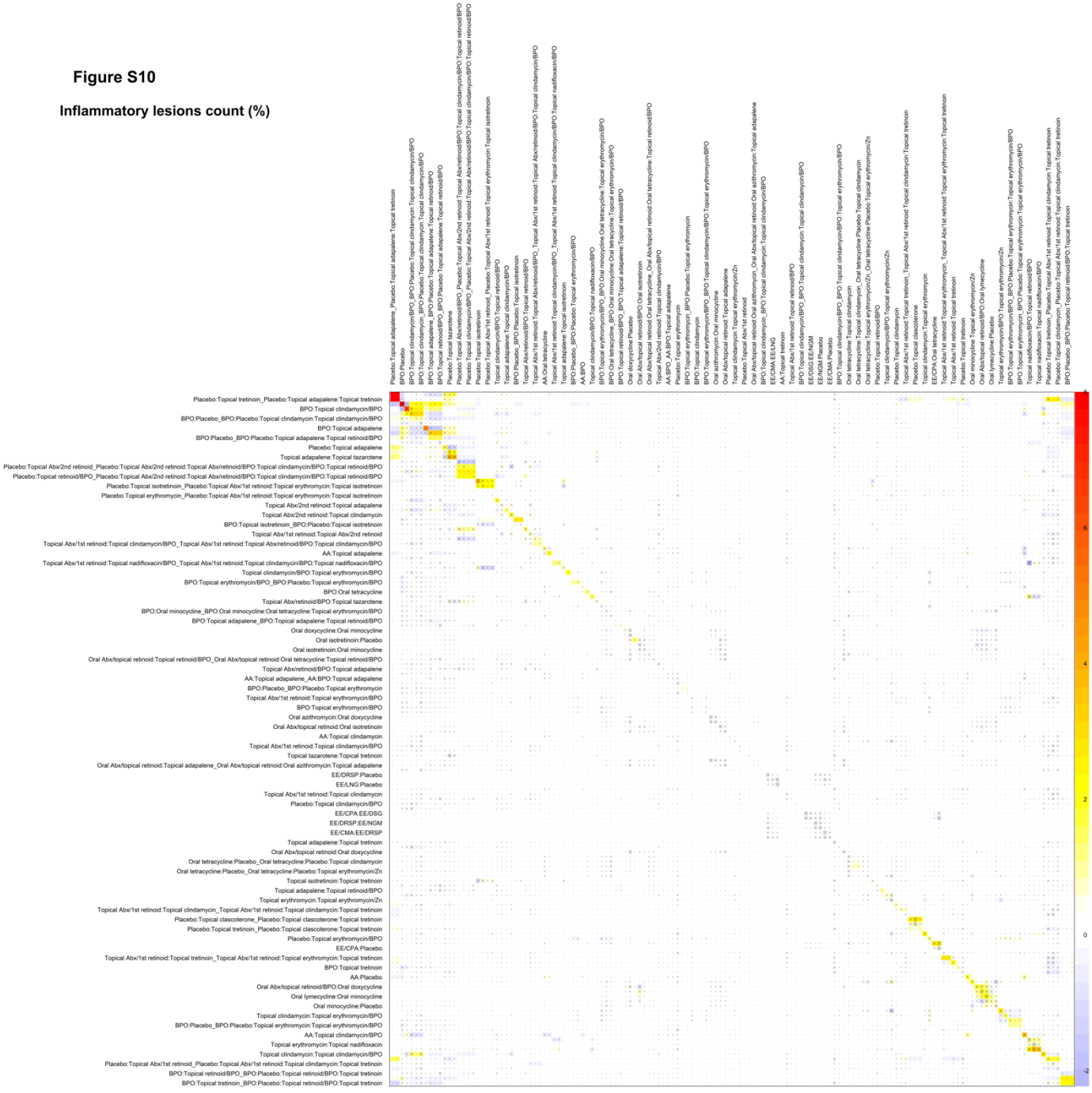
**Supplemental Figure 9. Net heat plot displaying hot spots of inconsistency in the network analysis of percentage reduction in total lesions count.**




The area of the gray squares represents the contribution of the direct estimate in design d (shown in the column) to the network estimate in design d' (shown in the row). The colors are correlated with the change in inconsistency between direct and indirect evidence in design d' (shown in the row) after detaching the effect of design d (shown in the column). Blue colors indicate an increase and red colors indicate a decrease (the deeper the intensity of the color,

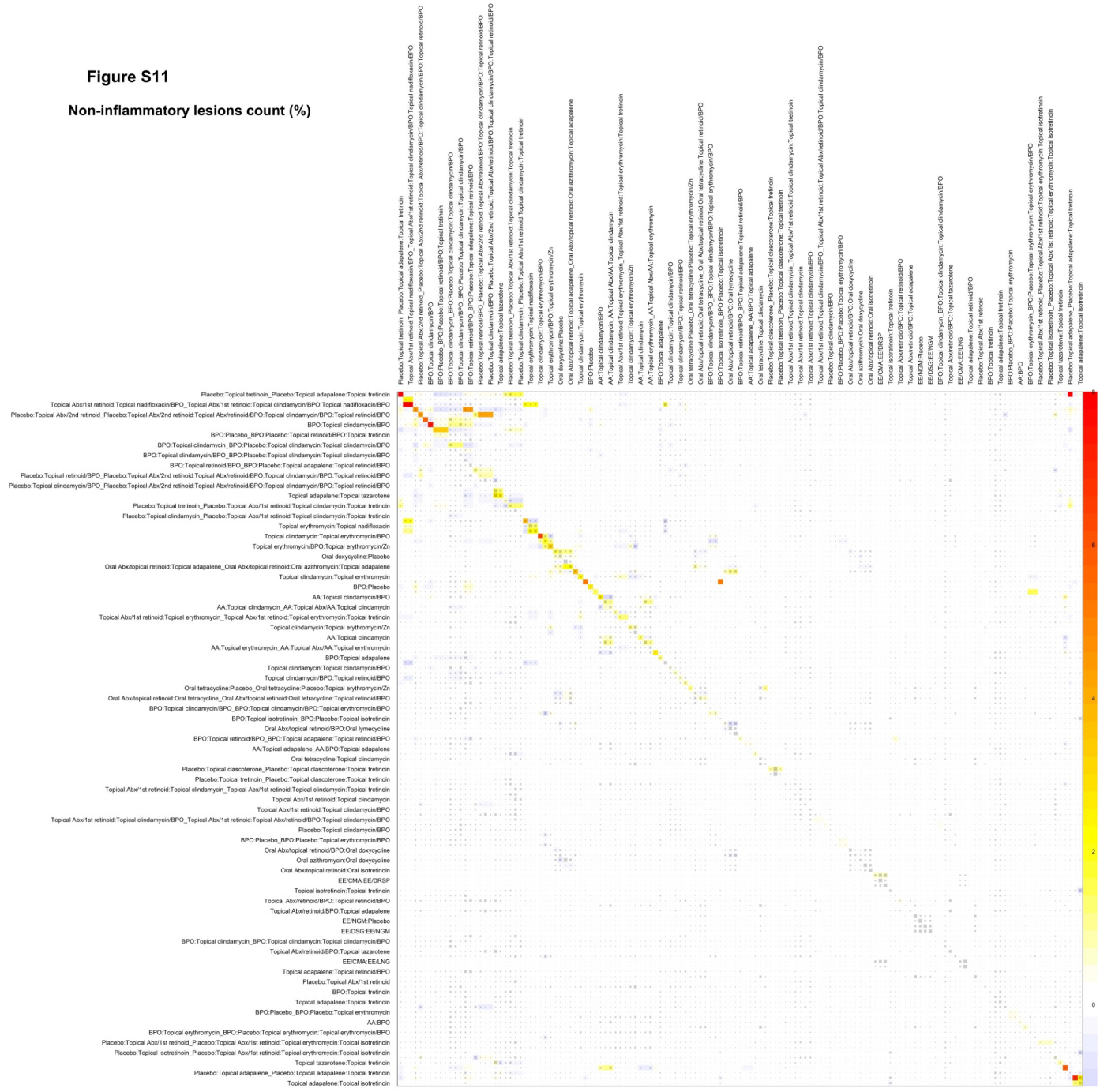
the stronger the change).

**Supplemental Figure 10. Net heat plot displaying hot spots of inconsistency in the network analysis of percentage reduction in inflammatory lesions count.**




The area of the gray squares represents the contribution of the direct estimate in design d (shown in the column) to the network estimate in design d' (shown in the row). The colors are correlated with the change in inconsistency between direct and indirect evidence in design d' (shown in the row) after detaching the effect of design d (shown in the column). Blue colors indicate an increase and red colors indicate a decrease (the deeper the intensity of the color, the stronger the change).

**Supplemental Figure 11. Net heat plot displaying hot spots of inconsistency in the network analysis of percentage reduction in non-inflammatory lesions count.**

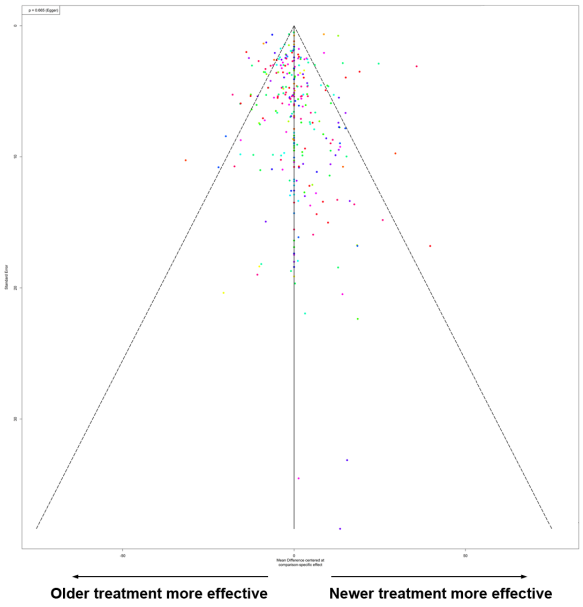



The area of the gray squares represents the contribution of the direct estimate in design d (shown in the column) to the network estimate in design d' (shown in the row). The colors are correlated with the change in inconsistency between direct and indirect evidence in design d' (shown in the row) after detaching the effect of design d (shown in the column). Blue colors indicate an increase and red colors indicate a decrease (the deeper the intensity of the color, the stronger the change).

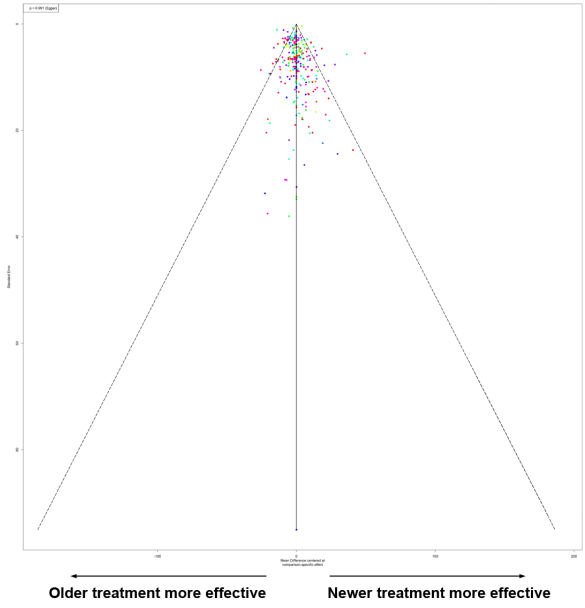
**Supplemental Figure 12. Comparison-adjusted funnel plots assessing the publication bias of the network of percentage reduction in lesion counts.**

**Figure S12**

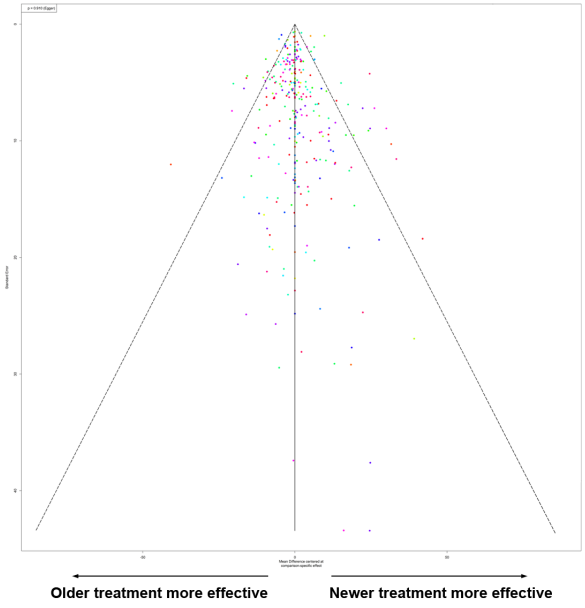
**a** Total lesions count (%)




**b** Inflammatory lesions count (%)



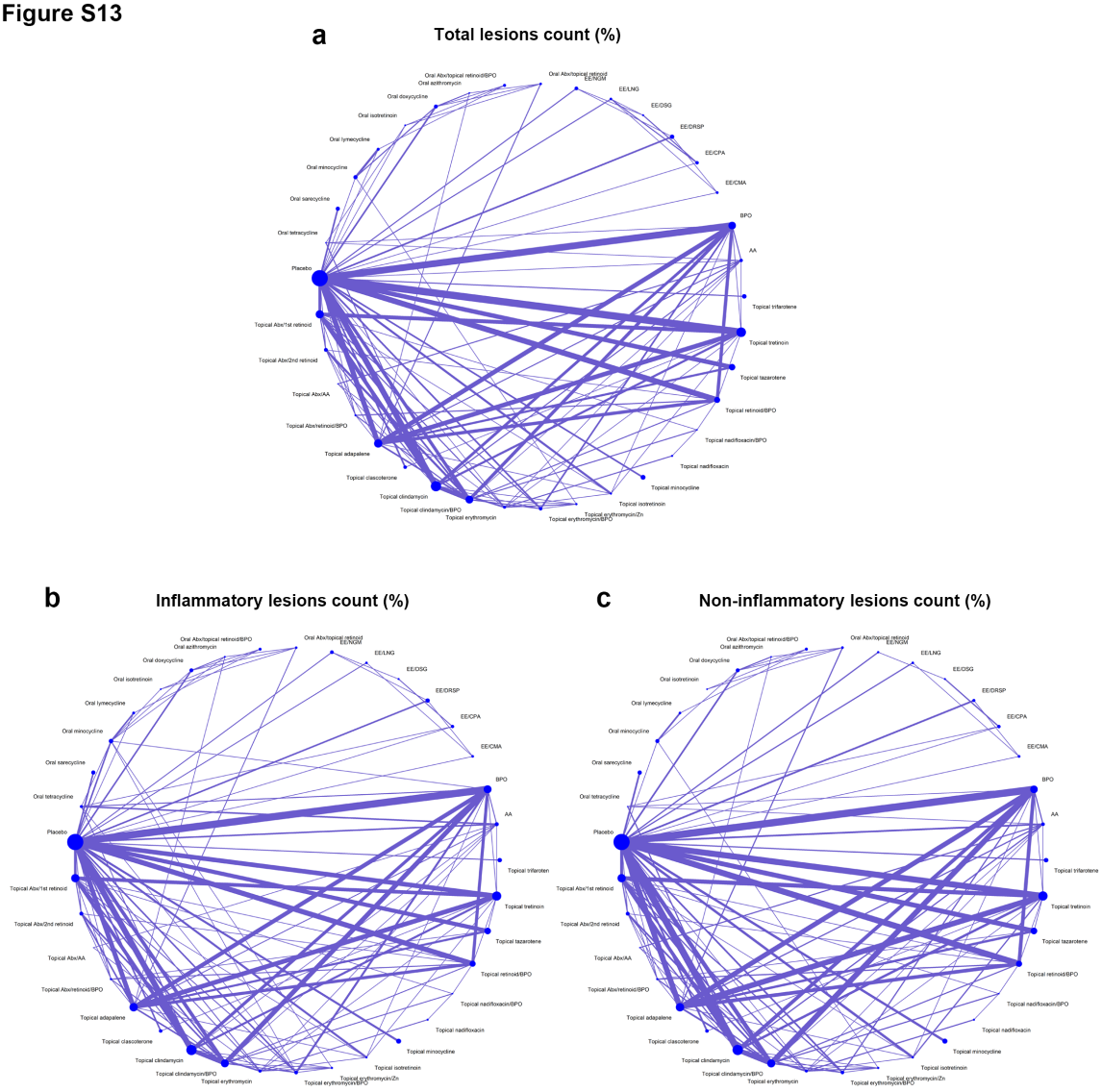

**c** Non-inflammatory lesions count (%)



**(a)** Total lesions count, **(b)** inflammatory lesions count, and **(c)** non-inflammatory lesions count. The solid line at the center represents the null hypothesis that the study-specific effect sizes do not differ from the respective comparison-specific pooled effect estimates. Different colors correspond to different comparisons. No conspicuous asymmetry is detected, indicating there is no significant publication bias.

**Supplemental Figure 13. Network diagrams of the percentage reduction in lesions count, excluding studies before 1985.**

**Figure S13**

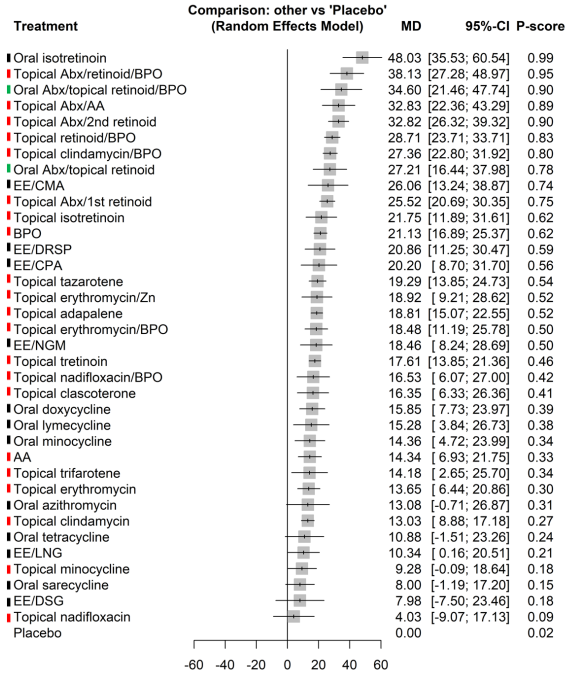

a
Total lesions count (%)
b
Inflammatory lesions count (%)
c
Non-inflammatory lesions count (%)
Oral Abx/topical retinoid/BPO
Oral azithromycin
Oral Abx/topical retinoid EE/NGM
EE/LNG
Oral doxycycline
EE/DSG
Oral isotretinoin
EE/DRSP
Oral lymecycline
EE/CPA
Oral minocycline
EE/CMA
Oral sarecycline
BPO
Oral tetracycline
AA
Placebo
Topical trifarotene
Topical Abx/1st retinoid
Topical tretinoin
Topical Abx/2nd retinoid
Topical tazarotene
Topical Abx/AA
Topical retinoid/BPO
Topical Abx/retinoid/BPO
Topical nadifloxacin/BPO
Topical adapalene
Topical nadifloxacin
Topical clascoterone
Topical minocycline
Topical clindamycin
Topical isotretinoin
Topical clindamycin/BPO
Topical erythromycin/Zn
Topical erythromycin
Topical erythromycin/BPO

**(a)** Total lesions count, **(b)** inflammatory lesions count, and **(c)** non-inflammatory lesions count. The size of each circle is proportional to the number of randomly assigned patients and the width of the lines corresponds to the number of trials.

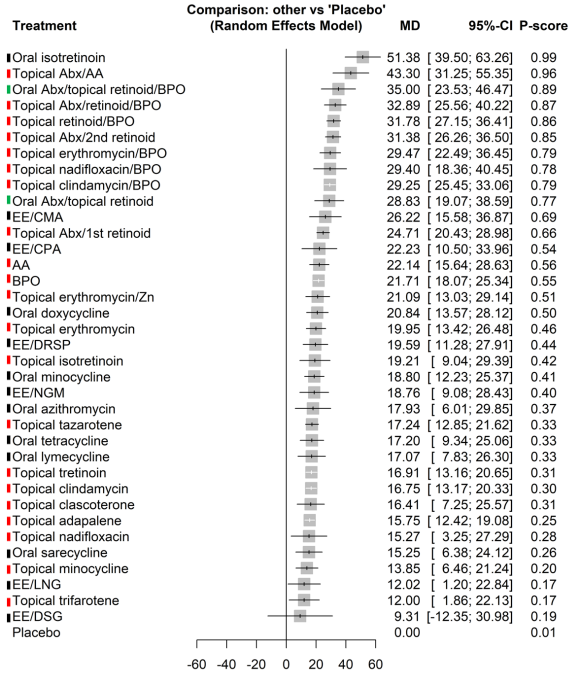
**Supplemental Figure 14. Estimates of the percentage reduction in lesions count compared with placebo, excluding studies before 1985.**

**Figure S14**

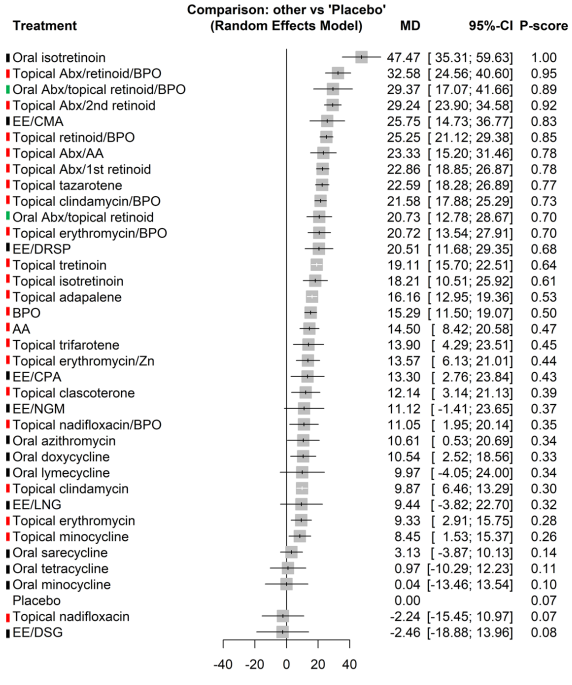
**a** Total lesions count (%)




**b** Inflammatory lesions count (%)



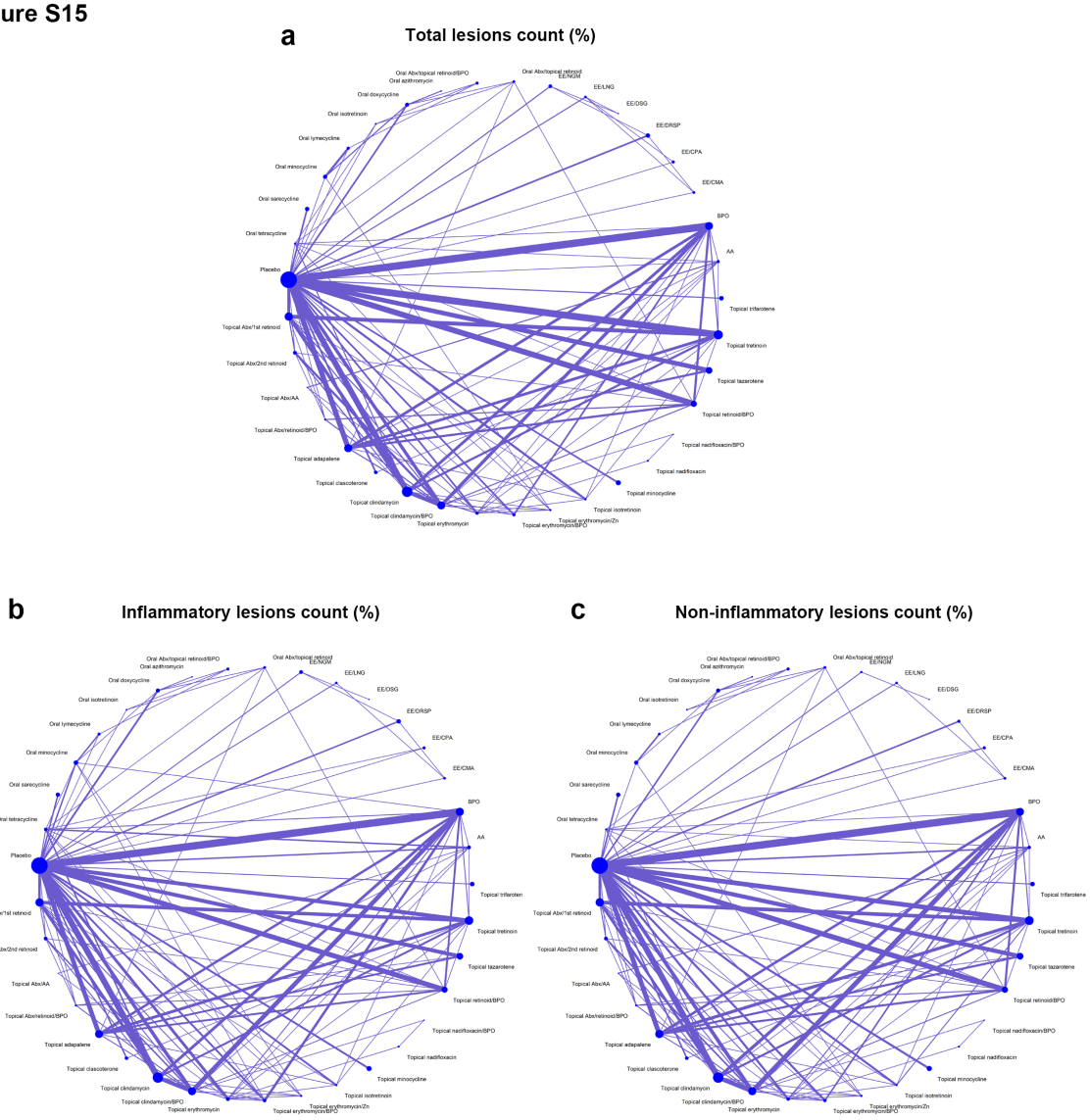

**c** Non-inflammatory lesions count (%)



Forest plots of mean difference (MD) and 95% confidence interval (CI) in percentage reduction in **(a)** total lesions count, **(b)** inflammatory lesions count, and **(c)** non-inflammatory lesions compared with placebo. Black: oral treatments; red: topical treatments; green: combined oral and topical treatments.

**Supplemental Figure 15. Network diagrams of the percentage reduction in lesions count, excluding studies with low quality scores.**

**Figure S15**


a
Total lesions count (%)
Oral Abx/topical retinoid/BPO
Oral azithromycin
Oral doxycycline
Oral isotretinoin
Oral lymecycline
Oral minocycline
Oral sarecycline
Oral tetracycline
Placebo
Topical Abx/1st retinoid
Topical Abx/2nd retinoid
Topical Abx/AA
Topical Abx/retinoid/BPO
Topical adapalene
Topical clascoterone
Topical clindamycin
Topical clindamycin/BPO
Topical erythromycin
Oral Abx/topical retinoid
EE/NGM
EE/LNG
EE/OSG
EE/DRSP
EE/CPA
EE/CMA
BPO
AA
Topical trifarotene
Topical tretinoin
Topical tazarotene
Topical retinoid/BPO
Topical nadifloxacin/BPO
Topical nadifloxacin
Topical minocycline
Topical isotretinoin
Topical erythromycin/Zn
Topical erythromycin/BPO
b
Inflammatory lesions count (%)
c
Non-inflammatory lesions count (%)

**(a)** Total lesions count, **(b)** inflammatory lesions count, and **(c)** non-inflammatory lesions count. The size of each circle is proportional to the number of randomly assigned patients and the width of the lines corresponds to the number of trials.

**Supplemental Table 1. Summary of the Search Strategies**

| EMBASE | | |
|---|---|---|
| **A.** | **Acne vulgaris** | 'acne vulgaris'/exp OR acne:ab,ti |
| **B.** | **Antibiotics** | 'antibiotic agent'/exp OR antibiotic*:ab,ti |
| **C.** | **Retinoid** | 'retinoid'/exp OR retinoi*:ab,ti |
| **D.** | **Hormonal therapy** | 'antiandrogen'/exp OR 'contraceptive agent'/exp OR contraceptive*:ab,ti OR antiandrogen:ab,ti OR anti-androgen:ab,ti |
| **E.** | **Benzoyl peroxide and azelaic acid** | 'benzoyl peroxide'/exp OR 'azelaic acid'/exp OR 'benzoyl peroxide':ab,ti OR 'azelaic acid':ab,ti |
| **F.** | **Article type** | 'clinical trial'/de OR 'comparative study'/de OR 'controlled clinical trial'/de OR 'phase 2 clinical trial'/de OR 'phase 3 clinical trial'/de OR 'randomized controlled trial'/de |

Search was combined as (**A** AND (**B** OR **C** OR **D** OR **E**) AND **F**.

| PubMed | | |
|---|---|---|
| **A.** | **Acne vulgaris** | "Acne Vulgaris"[Mesh] OR "acne"[Title/Abstract] |
| **B.** | **Antibiotics** | "Anti-Bacterial Agents"[Mesh] OR "antibiotic*"[Title/Abstract] |
| **C.** | **Retinoid** | "Retinoids"[Mesh] OR "retinoi*"[Title/Abstract] |
| **D.** | **Hormonal therapy** | "Contraceptive Agents"[Mesh] OR "Androgen Antagonists"[Mesh] OR "Contraceptive*"[Title/Abstract] OR "antiandrogen"[Title/Abstract] OR "anti-androgen"[Title/Abstract] |
| **E.** | **Benzoyl peroxide and azelaic acid** | "Benzoyl Peroxide"[Mesh] OR "benzoyl peroxide"[Title/Abstract] OR "azelaic acid"[Title/Abstract] |
| **F.** | **Article type** | “Clinical Trial”[ptyp] OR “Controlled Clinical Trial”[ptyp] OR “Randomized Controlled Trial”[ptyp] OR “Clinical Trial, Phase |

| | |
|---|---|
| | II”[ptyp] OR “Clinical Trial, Phase III”[ptyp] OR “Comparative Study”[ptyp] |

Search was combined as (**A** AND (**B** OR **C** OR **D** OR **E**) AND **F**.

**Supplemental Table 2. Criteria for Quality Assessment**

| Assessment | Explanation |
|---|---|
| **Was the study randomized?** (0-1) | One point when the study described as randomized |
| **Was the randomization scheme described and appropriate?** (0-1) | One point when the method of randomization is described and appropriate (computer-generated random numbers, reference to a random number table, etc.) |
| **Were the investigators blinded?** (0-1) | One point when the investigators, including the people delivering the interventions, measuring the lesion counts, and analyzing the results, were unaware of the assigned intervention |
| **Were the participants blinded?** (0-1) | One point when participants are unaware of their assigned intervention, with the use of appropriate oral or topical placebo when necessary |
| **Were the missing data unlikely to bias the result?** (0-1) | One point when the withdrawals were described with reasons, with the proportions of missing data less than 20% overall, and the differences less than 10% between intervention groups |
| **Quality score** (0-5) | The sum of the above five assessments. |

**Supplemental Table 3. Characteristics of Included Trials**

| Study | Intervention | Intervention nodes | Number of patients | Proportion of female (%) | Duration of treatment (weeks) | Mean age (years) | Baseline lesions (total/ inflammatory/ noninflammatory ) |
|---|---|---|---|---|---|---|---|
| Stein Gold, 2022 | topical clindamycin/BPO (1.2%/3.1% qd) vs topical adapalene/BPO (0.15%/3.1% qd) vs topical adapalene/clindamycin (0.15%/1.2% qd) vs topical adapalene/clindamycin /BPO (0.15%/1.2%/3.1% qd) vs placebo (qd) | Topical clindamycin/BPO vs Topical retinoid/BPO vs Topical Abx/2nd retinoid vs Topical Abx/retinoid/BPO vs Placebo | 741 | 61 | 12 | 20 | 89/39/50 |
| Aschoff, 2021 | topical tretinoin/clindamycin (0.025%/1% qd) vs topical adapalene/BPO (0.1%/2.5% qd) | Topical Abx/1st retinoid vs Topical retinoid/BPO | 40 | 45 | 3 | 22 | na/na/na |
| Raoof, 2020 | topical minocycline (4% qd) vs placebo (qd) | Topical minocycline vs Placebo | 1488 | 62 | 12 | 20 | 80/31/50 |
| Sayyafan, 2020 | topical erythromycin (2%) vs topical erythromycin/Zn (2%/1.2%) | Topical erythromycin vs Topical erythromycin/Zn | 102 | na | 3 | 18 | 79/31/48 |
| Webster, 2020 | topical tretinoin (0.1% qd) vs topical tretinoin (0.05% qd) vs topical tretinoin/BPO (0.1%/3% qd) vs topical tretinoin/BPO (0.05%/3% qd) vs BPO (3% qd) placebo (qd) | Topical retinoid/BPO vs Placebo | 702 | 63 | 12 | 22 | 70/27/43 |
| Tanghetti, 2020 | topical tazarotene (0.045% qd) vs placebo (qd) | Topical tazarotene vs Placebo | 1616 | 66 | 12 | 20 | 69/28/41 |
| Dogra, 2020 | topical clindamycin (1% qd) vs topical tretinoin (0.025% qd) vs topical tretinoin/clindamycin (0.04%/1% qd) | Topical clindamycin vs Topical tretinoin vs Topical Abx/1st retinoid | 750 | 40 | 12 | 20 | 65/28/35 |
| Hebert, 2020 (1) | topical clascoterone (1% bid) vs placebo (1% bid) | Topical clascoterone vs Placebo | 708 | 62 | 12 | 18 | 103/43/60 |
| Hebert, 2020 (2) | topical clascoterone (1% bid) vs placebo (1% bid) | Topical clascoterone vs Placebo | 732 | 63 | 12 | 18 | 105/42/63 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gold, 2019 | topical minocycline (4% qd) vs placebo (qd) | Topical minocycline vs Placebo | 961 | 58 | 12 | 20 | 81/32/49 |
| Tanghetti, 2019 | topical tazarotene (0.045% qd) vs topical tazarotene (0.1% qd) vs placebo (qd) | Topical tazarotene vs Placebo | 210 | 55 | 12 | 22 | 65/37/28 |
| Tan, 2019 (1) | topical trifarotene (50 ug/g qd) vs placebo (qd) | Topical trifarotene vs Placebo | 1208 | 52 | 12 | 19 | 88/35/53 |
| Tan, 2019 (2) | topical trifarotene (50 ug/g qd) vs placebo (qd) | Topical trifarotene vs Placebo | 1212 | 57 | 12 | 20 | 88/37/51 |
| Mazzetti, 2019 | topical clascoterone (0.1% bid) vs topical clascoterone (0.5% bid) vs topical clascoterone (1% qd or bid) vs placebo (qd or bid) | Topical clascoterone vs Placebo | 363 | 54 | 12 | 20 | na/na/na |
| Alexis, 2018 | topical minocycline (2% qd) vs topical minocycline (2% qd) vs placebo (qd) | Topical minocycline vs Placebo | 219 | 68 | 12 | 21 | 60/28/33 |
| Leyden, 2018 | oral sarecycline (0.75 mg/kg qd) vs oral sarecycline (1.5 mg/kg qd) vs oral sarecycline (3.0 mg/kg qd) vs placebo | Oral sarecycline vs Placebo | 285 | 60 | 12 | 20 | 86/33/53 |
| Moore, 2018 (1) | oral sarecycline (1.5 mg/kg qd) vs placebo | Oral sarecycline vs Placebo | 968 | 56 | 12 | 20 | 73/30/43 |
| Moore, 2018 (2) | oral sarecycline (1.5 mg/kg qd) vs placebo | Oral sarecycline vs Placebo | 1034 | 59 | 12 | 20 | 73/30/43 |
| Tyring, 2018 | topical tretinoin (0.05% qd) vs placebo (qd) | Topical tretinoin vs Placebo | 1640 | 55 | 12 | 21 | 69/26/43 |
| Dreno, 2018 | topical adapalene/BPO (0.3%/2.5% qd) vs placebo (qd) | Topical retinoid/BPO vs Placebo | 134 | 66 | 24 | 22 | 40/18/22 |
| Hayashi, 2018 | topical clindamycin/BPO (1.2%/3% qd) vs topical adapalene/clindamycin (0.1%/1.2% qd) | Topical clindamycin/BPO vs Topical Abx/2nd retinoid | 351 | 60 | 12 | 20 | 102/32/70 |
| Ghosh, 2018 | topical nadifloxacin/BPO (1%/2.5% bid/qd) vs topical adapalene/BPO (0.1%/2.5% bid/qd) | Topical nadifloxacin/BPO vs Topical retinoid/BPO | 38 | na | 12 | 20 | 23/5/18 |
| Jaisamrarn, 2018 | EE/CMA (30ug/2mg 21/7 cycles) vs EE/DRSP (30ug/3mg 21/7 cycles) | EE/CMA vs EE/DRSP | 180 | 100 | 24 | 28 | 62/17/45 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dreno, 2017 | topical adapalene/BPO (0.3%/2.5% qd) vs placebo (qd) | Topical retinoid/BPO vs Placebo | 76 | 37 | 18 | 23 | 49/25/24 |
| Kawashima, 2017 | BPO (5% qd) vs BPO (2.5% qd) vs placebo (qd) | BPO vs Placebo | 609 | 58 | 12 | 20 | 51/18/30 |
| Shemer, 2016 | topical minocycline (4% qd) vs topical minocycline (1% qd) vs placebo (qd) | Topical minocycline vs Placebo | 139 | 52 | 12 | 17 | na/na/na |
| Richter, 2016 | topical clindamycin/BPO (1.2%/5% qd) vs BPO (5% qd) | Topical clindamycin/BPO vs BPO | 24 | 63 | 12 | 21 | 58/22/35 |
| Shaller, 2016 | topical clindamycin/BPO (1%/3% qd) vs AA (20% bid) | Topical clindamycin/BPO vs AA | 217 | 55 | 12 | 20 | 82/27/55 |
| Xu, 2016 | topical clindamycin/BPO (1%/5% qd) vs topical clindamycin (1% bid) | Topical clindamycin/BPO vs Topical clindamycin | 1016 | 75 | 12 | 23 | 78/27/51 |
| Stein Gold, 2016 | topical adapalene/BPO (0.3%/2.5% qd) vs topical adapalene/BPO (0.1%/2.5% qd) vs placebo (qd) | Topical retinoid/BPO vs Placebo | 503 | 52 | 12 | 20 | 98/39/60 |
| Jawade, 2016 | topical adapalene (0.1% qd) vs topical adapalene/BPO (0.1%/2.5% qs) vs BPO (2.5% qd) | Topical adapalene vs Topical retinoid/BPO vs BPO | 132 | 58 | 12 | 19 | 44/7/37 |
| Kawashima, 2015 | topical clindamycin/BPO (1.2%/3% qd) vs topical clindamycin/BPO (1.2%/3% bid) vs topical clindamycin (1.2% bid) | Topical clindamycin/BPO vs Topical clindamycin | 799 | 66 | 12 | 21 | 79/29/50 |
| Moore, 2015 | oral doxycycline (40 mg MR qd) vs oral doxycycline (100 mg qd) vs placebo (qd) | Oral doxycycline vs Placebo | 662 | 53 | 12 | 19 | 68/34/34 |
| Weiss, 2015 | topical adapalene/BPO (0.3%/2.5% qd) vs topical adapalene/BPO (0.1%/2.5% qd) vs placebo (qd) | Topical retinoid/BPO vs Placebo | 252 | 46 | 12 | 19 | 111/46/65 |
| Thielitz, 2015 | topical adapalene (0.1% bid) vs AA (15% bid) | Topical adapalene vs AA | 55 | 100 | 36 | 29 | 47/20/28 |
| Kaur, 2015 | topical clindamycin/BPO (1%/2.5% qd) vs topical nadifloxacin/BPO | Topical clindamycin/BPO vs Topical nadifloxacin/BPO | 100 | na | 12 | na | 17/4/13 |

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| | (1%/2.5% qd) vs topical tretinoin/clindamycin (0.025%/1% qd) | vs Topical Abx/1st retinoid | | | | | |
| Pariser, 2014 | topical clindamycin/BPO (1.2%/3.75% qd) vs placebo (qd) | Topical clindamycin/BPO vs Placebo | 498 | 49 | 12 | 19 | 65/27/38 |
| Ocampo-Candiani, 2014 | oral minocycline (100 mg qd) vs oral lymecycline (300 mg qd) | Oral minocycline vs Oral lymecycline | 170 | na | 12 | 19 | 57/27/30 |
| Adhikary, 2014 | topical isotretinoin/clindamycin (0.05%/1% qd) vs topical adapalene/clindamycin (0.1%/1% qd) | Topical Abx/1st retinoid vs Topical Abx/2nd retinoid | 200 | 71 | 12 | 23 | 83/29/54 |
| Shwetha, 2014 | topical clindamcyin/BPO (1%/2.5% qd) vs topical adapalene/clindamycin (0.1%/1% qd) | Topical clindamycin/BPO vs Topical Abx/2nd retinoid | 120 | 44 | 12 | 18 | 50/13/37 |
| Kawashima, 2014 | BPO (3% qd) vs placebo (qd) | BPO vs Placebo | 360 | 65 | 12 | 22 | 71/28/43 |
| Jaisamrarn, 2014 | EE/NGM (35/185-250 ug 21/7 cycles) vs EE/DSG (30-40/25-125 ug 22/6 cycles) | EE/NGM vs EE/DSG | 201 | 100 | 24 | 30 | 17/5/11 |
| Tan, 2014 | oral doxycycline/topical adapalene/BPO (200 mg/1%/2.5%) vs oral isotretinoin (0.5-1 mg/kg/day) | Oral Abx/topical retinoid/BPO vs Oral isotretinoin | 266 | 15 | 20 | 19 | 107/50/57 |
| Rademaker, 2014 | oral isotretinoin (5 mg qd) vs placebo (qd) | Oral isotretinoin vs Placebo | 58 | 88 | 16 | 38 | 10/na/na |
| Ozgen, 2013 | topical nadifloxacin (1% qd) vs topical nadifloxacin/BPO (1%/5% qd/bid) | Topical nadifloxacin vs Topical nadifloxacin/BPO | 93 | 61 | 8 | 19 | 64/23/41 |
| Feldman, 2013 (1) | topical tazarotene (0.01% qd) vs placebo (qd) | Topical tazarotene vs Placebo | 743 | 51 | 12 | 18 | 82/32/50 |
| Feldman, 2013 (2) | topical tazarotene (0.01% qd) vs placebo (qd) | Topical tazarotene vs Placebo | 742 | 52 | 12 | 19 | 78/32/46 |
| Leyden, 2013 | oral doxycycline (2.4 mg/kg qd) vs oral doxycycline (1.2 mg/kg qd) oral doxycycline (0.6 mg/kg qd) vs placebo (qd) | Oral doxycycline vs Placebo | 257 | 57 | 12 | 20 | na/na/na |

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| Kim, 2013 | topical adapalene (0.1%) vs topical adapalene/BPO (0.1%/2.5%) | Topical adapalene vs Topical retinoid/BPO | 27 | 78 | 12 | 23 | 105/56/49 |
| Eichenfield, 2013 | topical adapalene/BPO (0.1%/2.5% qd) vs placebo (qd) | Topical retinoid/BPO vs Placebo | 285 | 76 | 12 | 10 | 54/15/38 |
| Tirado-Sánchez, 2013 | topical adapalene (0.3% qd) vs topical adapalene (0.1% qd) vs topical tretinoin (0.05% qd) vs placebo (qd) | Topical adapalene vs Topical tretinoin vs Placebo | 171 | 55 | 12 | 20 | 28/13/15 |
| Babaeinejad, 2013 | topical adapalene (0.1% qd) vs BPO (2.5% qd) | Topical adapalene vs BPO | 60 | 78 | 12 | 21 | 20/9/11 |
| Nandimath, 2013 | topical adapalene (0.1% qd) vs topical adapalene/clindamycin (0.1%/1% bid) | Topical adapalene vs Topical Abx/2nd retinoid | 60 | 75 | 12 | 20 | 70/20/49 |
| Takigawa, 2013 | topical adapalene (0.1% qd) vs topical adapalene/nadifloxacin (0.1%/1% qd/bid) | Topical adapalene vs Topical Abx/2nd retinoid | 187 | 66 | 12 | 23 | na/12/na |
| Palli, 2013 | EE/DRSP (20ug/3mg 24/4 cylces) vs placebo (qd) | EE/DRSP vs Placebo | 30 | 100 | 24 | 23 | 49/23/25 |
| Turan, 2012 | topical clindamycin/BPO (1%/5% bid) vs topical erythromycin/BPO (2%/5% bid) vs topical sulfacetamide/BPO (10%/5% bid) | Topical clindamycin/BPO vs Topical erythromycin/BPO | 60 | 80 | 12 | 19 | 92/7/85 |
| Eichenfield, 2012 | topical tretinoin (0.04% qd) vs placebo (qd) | Topical tretinoin vs Placebo | 110 | 75 | 12 | 11 | 66/10/56 |
| Gonzalez, 2012 | topical clindamycin/BPO (1.2%/5% qd) vs topical adapalene/BPO (0.1%/2.5% qd) | Topical clindamycin/BPO vs Topical Abx/2nd retinoid | 48 | 79 | 2 | 28 | 39/14/25 |
| Callender, 2012 | topical tretinoin/clindamycin (0.025%/1.2% qd) vs placebo (qd) | Topical Abx/1st retinoid vs Placebo | 33 | 79 | 12 | 28 | 69/13/56 |
| Guerra-Tapia, 2012 | topical clindamycin/BPO (1%/5% qd) vs topical adapalene (0.1% qd) | Topical clindamycin/BPO vs Topical adapalene | 168 | 73 | 12 | 19 | 41/19/21 |
| Draelos, 2012 | topical tretinoin/BPO (0.025%/5.5% qd/bid) vs topical tretinoin/clindamycin/BPO (0.025%/1%/5% qd/bid/bid) | Topical clindamycin/BPO vs Topical Abx/retinoid/BPO | 66 | 82 | 12 | na | 51/20/31 |

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| Jarratt, 2012 | topical clindamycin (1.2% qd) vs topical tretinoin (0.025% qd) vs topical tretinoin/clindamycin (0.025%/1.2% qd) vs placebo (qd) | Topical clindamycin vs Topical tretinoin vs Topical Abx/1st retinoid vs Placebo | 1649 | 58 | 12 | 20 | 71/26/46 |
| Eichenfield a, 2011 | topical clindamycin/BPO (1.2%/3% qd) vs topical clindamycin (1.2% qd) vs BPO (3% qd) vs placebo (qd) | Topical clindamycin/BPO vs Topical clindamycin vs BPO vs Placebo | 1315 | 60 | 12 | 20 | 72/27/45 |
| Pazoki-Toroudi, 2011 | topical clindamycin/AA (2%/5% bid) vs topical clindamycin (2% bid) vs AA (5% bid) | Topical clindamycin vs AA vs Topical Abx/AA | 150 | 41 | 12 | 22 | 59/na/na |
| Maleszka, 2011 | oral doxycycline (100 mg bid-qd) vs oral azithromycin (500 mg qd-qw) | Oral doxycycline vs Oral azithromycin | 240 | 46 | 12 | 20 | 80/41/40 |
| Hajheydari, 2011 | topical clindamycin (2% bid) vs topical erythromycin (2% bid) vs topical azithromycin (2% bid) | Topical clindamycin vs Topical erythromycin | 96 | 88 | 16 | 20 | 180/56/124 |
| Choudhury, 2011 | topical clindamycin/BPO (1%/2.5% bid/qd) vs topical nadifloxacin/BPO (1%/2.5% bid/qd) | Topical clindamycin/BPO vs Topical nadifloxacin/BPO | 84 | 52 | 8 | 21 | 25/6/19 |
| Schmidt, 2011 | topical clindamycin (1.2% qd) vs topical tretinoin/clindamycin (0.025%/1.2% qd) | Topical clindamycin vs Topical Abx/1st retinoid | 2010 | 52 | 12 | 19 | 80/31/49 |
| Kobayashi, 2011 | topical adapalene (0.1% qd) vs topical adapalene/nadifloxacin (0.1%/1% qd/bid) | Topical adapalene vs Topical Abx/2nd retinoid | 50 | 74 | 8 | 20 | na/na/na |
| Dreno, 2011 | oral lymecycline (300 mg qd) vs lymecycline/topical adapalene/BPO (300 mg/0.1%/2.5% qd) | Oral lymecycline vs Oral Abx/topical retinoid/BPO | 378 | 45 | 12 | 19 | 108/38/70 |
| Trifu, 2011 | topical clascoterone (1% qd) vs tretinoin (0.05% qd) vs placebo (qd) | Topical clascoterone vs Topical tretinoin vs Placebo | 79 | 0 | 8 | 21 | 48/30/18 |
| Pazoki-Toroudi, 2010 | topical erythromycin (2% bid) vs AA (5% bid) vs topical erythromycin/AA (2%/5% bid) vs placebo (bid) | Topical erythromycin vs AA vs Topical Abx/AA | 147 | 42 | 12 | 20 | 61/33/28 |

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| Tunca, 2010 | topical erythromycin (4% bid) vs topical nadifloxacin (1% bid) | Topical erythromycin vs Topical nadifloxacin | 86 | 64 | 12 | 20 | 49/27/22 |
| Tanghetti, 2010 | topical adapalene (0.3% qd) vs topical tazarotene (0.1% qd) | Topical adapalene vs Topical tazarotene | 180 | 62 | 16 | 21 | 98/33/66 |
| Eichenfield, 2010 | topical adapalene (0.1% qd) vs placebo (qd) | Topical adapalene vs Placebo | 2141 | 54 | 12 | 19 | 75/28/47 |
| Gold, 2010 | oral doxycycline (100 mg qd) vs oral doxycyclin/topical adapalene/BPO (100 mg/0.1%/2.5% qd) | Doxycycline vs Oral Abx/topical retinoid/BPO | 459 | 45 | 12 | 18 | 100/37/63 |
| Jackson, 2010 | topical clindamycin/BPO (1.2%/5% qd) vs topical tretinoin/clindamycin (0.025%/1.2% qd) | Topical clindamycin/BPO vs Topical Abx/1st retinoid | 54 | 54 | 16 | 17 | 58/24/35 |
| Kircik, 2009 | topical tretinoin (0.04% qd) vs topical tazarotene (0.05% qd) | Topical tretinoin vs Topical tazarotene | 40 | 43 | 12 | 21 | na/na/na |
| Stein Gold, 2009 | topical adapalene (0.1% qd) vs topical adapalene/BPO (0.1%/2.5% qd) vs BPO (2.5% qd) vs placebo (qd) | Topical adapalene vs Topical retinoid/BPO vs BPO vs Placebo | 1668 | 51 | 12 | 18 | 76/27/46 |
| Gollnick, 2009 | topical adapalene (0.1% qd) vs topical adapalene/BPO (0.1%/2.5% qd) vs BPO (2.5% qd) vs placebo (qd) | Topical adapalene vs Topical retinoid/BPO vs BPO vs Placebo | 1670 | 56 | 12 | 19 | 76/26/45 |
| Webster, 2009 | topical tretinoin (0.1% qd) vs topical tretinoin (0.05% qd) vs placebo (qd) | Topical tretinoin vs Placebo | 1537 | 52 | 12 | 19 | 74/23/51 |
| Zouboulis, 2009 | topical clindamycin/BPO (1.2%/2.5% qd) vs topical adapalene/BPO (0.1%/2.5% qd) | Topical clindamycin/BPO vs Topical retinoid/BPO | 382 | 50 | 12 | 21 | 92/40/52 |
| Nilfroushzadeh, 2009 | topical clindamycin (1% bid) vs topical tretinoin/clindamycin (0.025%/1% qd) vs topical clindamycin/salicylic acid (1%/2% bid) | Topical clindamycin vs Topical Abx/1st retinoid | 42 | 100 | 12 | na | na/na/na |
| Ko, 2009 | topical clindamycin/BPO (1%/5% qd) vs topical adapalene (0.1% qd) | Topical clindamycin/BPO vs Topical adapalene | 69 | 71 | 12 | 23 | 45/29/17 |

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| Kircik, Green, 2009 | topical clindamycin/BPO (1%/5% bid) vs BPO (5% bid) | Topical clindamycin/BPO vs BPO | 65 | 54 | 12 | 19 | na/na/na |
| Iftikhar, 2009 | topical adapalene (0.1% qd) vs BPO (4% qd) | Topical adapalene vs BPO | 200 | 66 | 20 | 21 | 96/na/na |
| Palombo-Kinne, 2009 | EE/CPA (35ug/2mg 21/7 cycles) vs EE/ dienogest (30ug/2mg 21/7 cycles) vs Placebo (qd) | EE/CPA vs Placebo | 1338 | 100 | 24 | 24 | 53/23/30 |
| Plewig, 2009 | EE/CMA (30ug/2mg 21/7 cycles) vs Placebo | EE/CMA vs Placebo | 387 | 100 | 24 | na | 56/23/33 |
| Thiboutot, 2008 | topical clindamycin (1.2% qd) vs topical clindamycin/BPO (1.2%/2.5% qd) vs BPO (2.5% qd) vs placebo (qd) | Topical clindamycin vs Topical clindamycin/BPO vs BPO vs Placebo | 2813 | 52 | 12 | 19 | 72/26/46 |
| Tanghetti, 2008 | clindamycin/BPO (1%/5% bid) vs BPO (5% bid) | Topical clindamycin/BPO vs BPO | 23 | 48 | 4 | 21 | na/na/na |
| Kawashima, 2008 | topical adapalene (0.1% qd) vs placebo (qd) | Topical adapalene vs Placebo | 200 | 89 | 12 | 24 | 63/21/42 |
| Langner, 2008 | topical clindamycin/BPO (1%/5% qd) vs topical adapalene (0.1% qd) | Topical clindamycin/BPO vs Topical adapalene | 130 | 59 | 12 | 22 | 95/35/60 |
| Koltun, 2008 | EE/DRSP (20ug/3mg 24/4 cylces) vs placebo (qd) | EE/DRSP vs Placebo | 534 | 100 | 24 | 25 | 80/33/47 |
| Maloney, 2008 | EE/DRSP (20ug/3mg 24/4 cylces) vs placebo (qd) | EE/DRSP vs Placebo | 431 | 100 | 24 | 25 | 76/32/44 |
| Berger, 2007 | topical tretinoin (0.04% qd) vs placebo (qd) | Topical tretinoin vs Placebo | 178 | 82 | 12 | 28 | 42/17/25 |
| Oprica, 2007 | oral isotretinoin (1 mg/kg/day) vs oral tetracycline/topical adapalene (500 mg/0.1% bid/qd) | Oral isotretinoin vs Oral Abx/topical retinoid | 49 | 35 | 24 | 19 | 191/54/137 |
| Thiboutot, 2007 | topical adapalene (0.1% qd) vs topical adaplaene/BPO (0.1%/2.5% qd) vs BPO (2.5% qd) vs placebo (qd) | Topical adapalene vs Topical retinoid/BPO vs BPO vs Placebo | 517 | 40 | 12 | 16 | 76/28/44 |
| Ghoshal, 2007 | oral azithromycin (500mg tiw) vs topical adapalene (1% qd) vs oral azithromycin/topical | Oral azithromycin vs Topical adapalene vs Oral Abx/topical retinoid | 75 | 56 | 12 | 19 | 162/83/79 |

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|---|---|---|---|---|---|---|---|
| | adapalene (500 mg tiw/1% qd) | | | | | | |
| Tanghetti, 2007 | topical tazarotene/clindamycin (0.1%/1% qd) vs topical tretinoin/clindamycin (0.025%/1% qd) | Topical Abx/1st retinoid vs Topical Abx/2nd retinoid | 150 | 59 | 12 | 21 | 65/25/40 |
| Del Rosso, 2007 | topical clindamycin/BPO (1%/5% qd) vs topical adapalene (0.1% qd) vs topical adapalene/clindamycin /BPO (0.1%/1%/5% qd) | Topical clindamycin/BPO vs Topical adapalene vs Topical Abx/retinoid/BPO | 109 | 57 | 12 | 18 | 81/32/49 |
| Schlessinger, 2007 | topical clindamycin (1.2% qd) vs topical tretinoin (0.025% qd) vs topical tretinoin/clindamycin (0.025%/1.2% qd) vs placebo (qd) | Topical clindamycin vs Topical tretinoin vs Topical Abx/1st retinoid vs Placebo | 2540 | 51 | 12 | 19 | 78/29/49 |
| Langner, 2007 | topical clindamycin/BPO (1%/5% qd) vs topical erythromycin/Zn (4%/1.2% bid) | Topical clindamycin/BPO vs Topical erythromycin/Zn | 148 | 66 | 12 | 20 | 89/35/54 |
| Iraji, 2007 | AA (20% bid) vs placebo (bid) | AA vs Placebo | 61 | 60 | 6.5 | 18 | na/na/na |
| Stinco, 2007 | topical adapalene (qd) vs AA (qd) vs BPO (qd) | Topical adapalene vs AA vs BPO | 65 | 80 | 8 | 17 | 62/18/44 |
| Webster, 2006 (1) | topical tretinoin (0.025% qd) vs topical tretinoin (0.01% qd) vs placebo (qd) | Topical tretinoin vs Placebo | 398 | 45 | 12 | 18 | na/na/na |
| Webster, 2006 (2) | topical tretinoin (0.025% qd) vs topical tretinoin (0.01% qd) vs placebo (qd) | Topical tretinoin vs Placebo | 412 | 45 | 12 | 18 | na/na/na |
| Webster, 2006 (3) | topical tretinoin (0.025% qd) vs topical tretinoin (0.01% qd) vs placebo (qd) | Topical tretinoin vs Placebo | 402 | 44 | 12 | 18 | na/na/na |
| Webster, 2006 (4) | topical tretinoin (0.025% qd) vs topical tretinoin (0.01% qd) vs placebo (qd) | Topical tretinoin vs Placebo | 430 | 45 | 12 | 18 | na/na/na |
| Stewart, 2006 | oral minocycline (1 mg/kg qd) vs oral minocycline (2 mg/kg qd) vs oral minocycline (3 mg/kg qd) vs placebo (qd) | Oral minocycline vs Placebo | 233 | 46 | 12 | 18 | na/41/na |

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| Fleischer, 2006 | oral minocycline (1 mg/kg qd) vs placebo (qd) | Oral minocycline vs Placebo | 1038 | 43 | 12 | 20 | 84/39/45 |
| Plewig, 2006 | topical erythromycin (2% bid) vs topical nadifloxacin (1% bid) | Topical erythromycin vs Topical nadifloxacin | 474 | 50 | 12 | 22 | 73/33/40 |
| Thiboutot, 2006 | topical adapalene (0.3% qd) vs topical adapalene (0.1% qd) vs placebo (qd) | Topical adapalene vs Placebo | 653 | 51 | 12 | 18 | 63/25/34 |
| Tanghetti, 2006 | topical tazarotene (0.1% qd) vs topical tazarotene/clindamycin/BPO (0.1%/1%/5% qd) | Topical tazarotene vs Topical Abx/retinoid/BPO | 121 | 60 | 12 | 20 | na/na/na |
| Leyden J.J., 2006 | topical clindamycin (1% qd) vs topical tretinoin (0.025% qd) vs topical tretinoin/clindamycin (0.025%/1% qd) vs placebo (qd) | Topical clindamycin vs Topical tretinoin vs Topical Abx/1st retinoid vs Placebo | 2219 | 54 | 12 | 20 | 77/26/51 |
| Alirezaï, 2005 | topical clindamycin (1% qd) vs topical clindamycin (1% bid) vs placebo (qd) | Topical clindamycin vs Placebo | 592 | 58 | 12 | 21 | 99/29/70 |
| Shalita, Myers, 2005 | topical clindamycin (1% qd) vs placebo (qd) | Topical clindamycin vs Placebo | 1026 | 53 | 12 | 19 | 73/26/47 |
| Kus, 2005 | oral doxycycline (100 mg bid-qd) vs oral azithromycin (500 mg tiw-biw-qw) | Oral doxycycline vs Oral azithromycin | 51 | 63 | 12 | 21 | 69/26/43 |
| Korkut, 2005 | topical adapalene (0.1% qd) vs topical adapalene/BPO (0.1/5% qd) vs BPO (5% qd) | Topical adapalene vs Topical retinoid/BPO vs BPO | 105 | 75 | 18 | 18 | 119/26/93 |
| Shalita, Miller, 2005 | topical adapalene (0.1% qd) vs topical tazarotene (0.1% qd) | Topical adapalene vs Topical tazarotene | 173 | 59 | 12 | 20 | 61/17/44 |
| Bowman, 2005 | topical clindamycin/BPO (1%/5% qd) vs topical tretinoin/clindamycin (0.025%/1% qd) vs topical tretinoin/clindamycin/BPO (0.025%/1%/5% qd/bid/qd) | Topical clindamycin/BPO vs Topical Abx/1st retinoid vs Topical Abx/retinoid/BPO | 132 | 61 | 12 | 19 | 97/32/65 |
| Thiboutot, 2005 | oral doxycyclin/topical adapalene (100 mg/ 0.1% qd) vs oral doxycycline (100 mg qd) | Oral Abx/topical retinoid vs Oral doxycycline | 467 | 46 | 12 | 18 | 82/33/49 |

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| Pariser, 2005 | topical adapalene (0.3% qd) vs topical adapalene (0.1% qd) vs placebo (qd) | Topical adapalene vs Placebo | 214 | 41 | 12 | 17 | 77/31/45 |
| Gollnick, 2004 (1) | AA (15% bid) vs BPO (5% bid) | AA vs BPO | 351 | 62 | 12 | 21 | 42/20/21 |
| Gollnick, 2004 (2) | AA (15% bid) vs topical clindamycin (1% bid) | AA vs Topical clindamycin | 229 | 55 | 12 | 21 | 36/20/16 |
| Ozolins, 2004 | oral doxycycline (500 mg bid) vs oral minocycline (100 mg qd) vs topical erythromycin/BPO (5%/3% bid) vs topical erythromycin/BPO (5%/2% qd) vs BPO (5% qd) | Oral doxycycline vs Oral minocycline vs Topical erythromycin/BPO vs BPO | 761 | 55 | 18 | 20 | na/53/na |
| Peker, 2004 | topical clindamycin (1% bid) vs topical erythromycin (4% bid) vs oral tetracycline (3% bid) | Topical clindamycin vs Topical erythromycin | 60 | 60 | 12 | 18 | 77/34/33 |
| Leyden, 2004 | oral minocycline (100 mg bid) vs oral compound A (25 mg qd) vs oral minocycline/compound A (100mg/25mg bid/qd) vs placebo (bid) | Oral minocycline vs Placebo | 182 | na | 12 | na | na/29/na |
| Shalita, 2004 | topical tazarotene (0.1% qd) vs placebo (qd) | Topical tazarotene vs Placebo | 847 | 49 | 12 | 19 | 84/23/58 |
| Zhang, 2004 | topical adapalene/clindamycin (0.1%/1% qd/bid) vs topical clindamycin (1% bid) | Topical Abx/2nd retinoid vs Topical clindamycin | 300 | 68 | 12 | 22 | 54/21/33 |
| Thorneycroft, 2004 | EE/NGM (35ug/180-250ug 21/7 cycles) vs EE/DRSP (30ug/3mg 21/7 cycles) | EE/NGM vs EE/DRSP | 1148 | 100 | 24 | 24 | na/na/na |
| Bossuyt, 2003 | oral minocycline (100 mg qd) vs oral lymecycline (300 mg qd) | Oral minocycline vs Oral lymecycline | 134 | 40 | 12 | 19 | 63/33/30 |
| Dubertret, 2003 | oral lymecycline (300 mg qd) vs oral lymecycline (150 mg bid) vs placebo (bid) | Oral lymecycline vs Placebo | 271 | 47 | 12 | 21 | na/na/na |
| Skidmore, 2003 | oral doxycycline (20 mg bid) vs placebo (bid) | Oral doxycycline vs Placebo | 51 | 51 | 24 | 23 | 82/29/53 |
| Do Nascimento, 2003 | topical adapalene (0.1% qd) vs BPO (4% bid) | Topical adapalene vs BPO | 178 | 50 | 11 | 17 | na/na/na |

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| Wolf, 2003 | topical adapalene/clindamycin (0.1%/1% qd/bid) vs topical clindamycin (1% bid) | Topical Abx/2nd retinoid vs Topical clindamycin | 249 | 54 | 12 | 18 | 70/21/49 |
| Cunliffe, 2003 | oral lymecycline/topical adapalene (300 mg/0.1% qd) vs oral lymecycline (300 mg qd) | Oral Abx/topical retinoid vs Oral lymecycline | 242 | 53 | 12 | 19 | 106/37/70 |
| Gupta, 2003 | topical erythromycin/BPO (3%/5% bid) vs topical tretinoin/erythromycin (0.025%/4% bid) | Topical erythromycin/BPO vs Topical Abx/1st retinoid | 112 | na | 12 | 19 | 57/25/32 |
| Rosen, 2003 | EE/DSG (30 ug/150 ug qd) vs EE/LNG (30 ug/150 ug qd) | EE/DSG vs EE/LNG | 34 | 100 | 36 | 34 | 29/na/na |
| Cunliffe, 2002 | topical clindamycin (1% bid) vs topical clindamycin/BPO (1%/5% bid) | Topical clindamycin vs Topical clindamycin/BPO | 79 | 29 | 16 | 18 | 89/38/50 |
| Jones, 2002 | topical erythromycin/BPO (3%/5% bid) vs placebo (bid) | Topical erythromycin/BPO vs Placebo | 223 | 50 | 8 | 19 | 72/30/42 |
| Thiboutot, 2002 | topical erythromycin/BPO (3%/5% bid) vs placebo (bid) | Topical erythromycin/BPO vs Placebo | 327 | 69 | 8 | 20 | 83/27/55 |
| Piérard-Franchimont, 2002 | oral minocycline (50 mg bid/qd) vs oral minocycline (50 mg qd) vs oral lymecycline (300 mg qd) | Oral minocycline vs Oral lymecycline | 86 | na | 12 | 24 | na/23/na |
| Bershad, 2002 | topical tazarotene (0.1% bid) vs topical tazarotene (0.1% qd) vs placebo (bid) | Topical tazarotene vs Placebo | 99 | 65 | 12 | 25 | 64/21/43 |
| Webster, 2002 | topical adapalene (0.1% qd) vs topical tazarotene (0.1% qd) | Topical adapalene vs Topical tazarotene | 145 | 49 | 12 | 18 | 79/19/60 |
| Aydin, 2002 | topical tretinoin (0.025% qd) vs topical adapalene (0.1% qd) | Topical tretinoin vs Topical adapalene | 40 | 63 | 12 | 21 | 57/16/41 |
| Ioannides, 2002 | topical isotretinoin (0.05% qd) vs topical adapalene (0.1% qd) | Topical isotretinoin vs Topical adapalene | 80 | 55 | 12 | na | 108/20/88 |
| Marazzi, 2002 | topical erythromycin/BPO (3%/5% bid) vs topical isotretinoin/erythromycin (0.01%/4% qd) | Topical Erythromycin/BPO vs Topical Abx/1st retinoid | 188 | 90 | 12 | 17 | 79/35/44 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Leyden, 2002 | EE/LNG (20ug/100ug 21/7 cycles) vs Placebo (qd) | EE/LNG vs Placebo | 371 | 100 | 24 | 25 | 70/22/48 |
| Ergin, 2001 | topical erythromycin/BPO (3%/5% bid) vs BPO (5% bid) | Topical erythromycin/BPO vs BPO | 75 | 69 | 16 | 18 | 58/na/na |
| Tschen, 2001 | topical clindamycin (1% bid) vs topical clindamycin/BPO (1%/5% bid) vs BPO (5% bid) vs placebo (bid) | Topical clindamycin vs Topical clindamycin/BPO vs BPO vs Placebo | 287 | 50 | 10 | 19 | na/25/na |
| Nyirady , 2001 | topical tretinoin (0.1% qd) vs topical adapalene (0.1% qd) | Topical tretinoin vs Topical adapalene | 186 | 55 | 12 | 21 | 64/20/45 |
| Tu, 2001 | topical tretinoin (0.025% qd) vs topical adapalene (0.1% qd) | Topical tretinoin vs Topical adapalene | 150 | 59 | 8 | 19 | 59/na/na |
| Leyden, Lowe, 2001 | topical adapalene (0.1% qd) vs topical tazarotene (0.1% qod) | Topical adapalene vs Topical tazarotene | 164 | 49 | 15 | 19 | 92/27/65 |
| Leyden, Hickman, 2001 | topical clindamycin/BPO (1%/5% bid) vs topical erythromycin/BPO (3%/5% bid) vs BPO (5% bid) | Topical clindamycin/BPO vs Topical erythromycin/BPO vs BPO | 492 | 59 | 10 | 19 | 53/19/34 |
| Leyden, Berger, 2001 | topical clindamycin (1% bid) vs topical clindamycin/BPO (1%/5% bid) vs BPO (5% bid) vs placebo (bid) | Topical clindamycin vs Topical clindamycin/BPO vs BPO vs Placebo | 480 | 54 | 10 | 19 | 49/20/29 |
| Triboutot, 2001 | EE/LNG (20ug/100ug 21/7 cycles) vs placebo (qd) | EE/LNG vs Placebo | 201 | 100 | 24 | 28 | 58/19/39 |
| Vartiainen, 2001 | EE/DSG (40ug/25-125ug 22/6 cycles) vs EE/CPA (35ug/2mg 21/7 cycles) | EE/DSG vs EE/CPA | 172 | 100 | 24 | na | 31/20/11 |
| Worret, 2001 | EE/LNG (30ug/150ug 21/7 cycles) vs EE/CMA (30ug/2mg 21/7 cycles) | EE/LNG vs EE/CMA | 199 | 100 | 48 | na | 16/8/8 |
| Langner, 2000 | topical isotretinoin (0.1% bid) vs topical isotretinoin (0.05% bid) vs placebo (bid) | Topical isotretinoin vs Placebo | 127 | 52 | 12 | 19 | 86/38/47 |
| Zouboulis, 2000 | topical clindamycin (1% bid) vs topical tretinoin/clindamycin (0.025%/1% qd) | Topical clindamycin vs Topical Abx/1st retinoid | 209 | 52 | 12 | 19 | na/56/na |
| Shalita, 1999 | topical tazarotene (0.1% qd) vs topical | Topical tazarotene vs Placebo | 446 | 47 | 12 | 21 | 80/21/59 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | tazarotene (0.05% qd) vs placebo (qd) | | | | | | |
| Piérard-Franchimont, 1999 | topical tretinoin (0.05% qd) vs topical adapalene (0.1% qd) | Topical tretinoin vs Topical adapalene | 50 | na | 6 | na | na/na/na/ |
| Glass, 1999 | topical erythromycin (2% bid) vs topical isotretinoin (0.05% bid) vs topical isotretinoin/erythromycin (0.05%/2% bid) vs placebo (bid) | Topical erythromycin vs Topical isotretinoin vs Topical Abx/1st retinoid vs Placebo | 160 | 23 | 12 | 19 | na/na/na |
| Gruber, 1998 | oral minocycline (100 mg qd) vs oral azithromycin (500 mg qd) | Oral minocycline vs Oral azithromycin | 72 | 53 | 6 | 22 | 25/na/na |
| Grosshan, Belaich, 1998 | oral minocycline (100 mg qd-qod) vs oral lymecycline (150 mg bid-qd) | Oral minocycline vs Oral lymecycline | 144 | 40 | 12 | 19 | 70/31/39 |
| Ellis, 1998 | topical adapalene (0.1% qd) vs topical tretinoin (0.025% qd) | Topical adapalene vs Topical tretinoin | 297 | 49 | 12 | 19 | 82/27/55 |
| Grosshans, Marks, 1998 | topical tretinoin (0.025% qd) vs topical adapalene (0.1% qd) | Topical tretinoin vs Topical adapalene | 105 | 37 | 12 | 20 | 72/24/47 |
| Richter, Förström, 1998 | topical tretinoin (0.025% qd) vs topical tretinoin/clindamycin (0.025%/1.2% qd) | Topical tretinoin vs Topical Abx/1st retinoid | 152 | 42 | 12 | 20 | 133/49/84 |
| Richter, Bousema, 1998(1) | topical clindamycin (1.2% qd) vs topical tretinoin/clindamycin (0.025%/1.2% qd) | Topical clindamycin vs Topical Abx/1st retinoid | 162 | 33 | 12 | 18 | 130/39/81 |
| Richter, Bousema, 1998(2) | topical tretinoin (0.025% qd) vs topical tretinoin/clindamycin (0.025%/1.2% qd) | Topical tretinoin vs Topical Abx/1st retinoid | 157 | 48 | 12 | 18 | 120/33/87 |
| Lookingbill, 1997 | topical clindamycin (1% qd) vs topical clindamycin/BPO (1%/5% qd) vs BPO (5% qd) vs placebo (qd) | Topical clindamycin vs Topical clindamycin/BPO vs BPO vs Placebo | 393 | 51 | 11 | 19 | 86/29/57 |
| Chu, 1997 | topical erythromycin/BPO (3%/5% bid) vs topical erythromycin/Zn (4%/1.2% bid) | Topical erythromycin/BPO vs Topical erythromycin/Zn | 67 | na | 10 | 24 | 61/23/38 |
| Cunliffe, 1997 | topical tretinoin (0.025% qd) vs topical adapalene (0.1% qd) | Topical tretinoin vs Topical adapalene | 268 | 47 | 12 | 19 | 106/34/72 |
| Lucky, 1997 | EE/NGM (35ug/180-250ug 21/7 cycles) vs placebo | EE/NGM vs Placebo | 234 | 100 | 24 | 27 | 52/19/33 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Redmond, 1997 | EE/NGM (35ug/180-250ug 21/7 cycles) vs placebo | EE/NGM vs Placebo | 231 | 100 | 24 | 28 | 56/19/37 |
| Packman, 1996 | topical erythromycin/BPO (3%/5% bid) vs topical clindamycin (bid) | Topical erythromycin/BPO vs Topical clindamycin | 199 | na | 10 | na | 43/18/25 |
| Sklar, 1996 | topical erythromycin/BPO (3%/5% bid) vs BPO (10% bid) vs placebo (bid) | Topical erythromycin/BPO vs BPO vs Placebo | 94 | na | 12 | na | 29/19/10 |
| Shalita, 1996 | topical tretinoin (0.025% qd) vs topical adapalene (0.1% qd) | Topical tretinoin vs Topical adapalene | 323 | na | 12 | na | 84/na/na |
| Goujon, 1995 | topical tretinoin (0.05% qd) vs topical isotretinoin (0.05% qd) | Topical tretinoin vs Topical isotretinoin | 20 | 65 | 12 | na | na/na/65 |
| Fonseca, 1995 | topical erythromycin (2% bid) vs topical tretinoin (0.05% qd) vs topical tretinoin/erythromycin (0.05%/2% qd) | Topical erythromycin vs Topical tretinoin vs Topical Abx/1st retinoid | 272 | 39 | 10 | 19 | 65/22/43 |
| Bojar, 1994 | topical erythromycin (4% bid) vs topical erythromycin/Zn (4%/1.2% bid) | Topical erythromycin vs Topical erythromycin/Zn | 52 | 33 | 12 | 19 | 108/54/54 |
| Dieben, 1994 | EE/DSG (30-40ug/25-125ug 22/6 cycles) vs EE/CPA (35ug/2mg 21/7 cycles) | EE/DSG vs EE/CPA | 183 | 100 | 16 | na | 29/13/16 |
| Stainforth, 1993 | oral minocycline (50mg qd) vs topical erythromycin/Zn (4%/1.2% bid) | Oral minocycline vs Topical erythromycin/Zn | 105 | 43 | 8 | 20 | 134/62/72 |
| DeVillez, 1992 | topical erythromycin/BPO (3%/5% bid) vs BPO (4% bid) | Topical erythromycin/BPO vs BPO | 30 | 20 | 11 | 16 | na/29/na |
| Hughes, 1992 | topical isotretinoin (0.05% bid) vs BPO (5% bid) vs placebo (bid) | Topical isotretinoin vs BPO vs Placebo | 77 | 40 | 12 | 19 | 90/43/48 |
| Norris, 1991 | oral oxytetracycline (250 mg bid) vs BPO (5% qd) vs topical oral tetracycline (bid) | Oral tetracycline vs BPO | 69 | 65 | 12 | na | 78/61/17 |
| Wishart, 1991 | EE/LNG (30ug/50-125ug 21/7 cycles) vs EE/CPA (50ug/2mg 21/7 cycles) | EE/LNG vs EE/CPA | 20 | 100 | 24 | 22 | na/na/na |
| Schachner, 1990 | oral minocycline (50 mg bid) vs topical clindamycin (1% bid) | Oral minocycline vs Topical clindamycin | 66 | 36 | 12 | na | 105/50/55 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Hjorth, 1989 (1) | oral tetracycline (1000mg-750mg-500mg qd) vs AA (20% bid) | Oral tetracycline vs AA | 333 | 47 | 20 | na | na/36/na |
| Hjorth, 1989 (2) | oral tetracycline (1000mg-750mg-500mg qd) vs AA (20% bid) | Oral tetracycline vs AA | 261 | 26 | 24 | na | na/20/na |
| Katsambas, 1989 (1) | AA (20%) vs placebo | AA vs Placebo | 92 | 71 | 12 | 19 | na/29/na |
| Katsambas, 1989 (2) | topical tretinoin (0.05% qd-bid) vs AA (20% qd-bid) | Topical tretinoin vs AA | 289 | 53 | 24 | 17 | 62/11/51 |
| Pastrana-Ruiz, 1989 | oral tetracycline (500 mg qd) vs topical clindamycin (1% qd) | Oral tetracycline vs Topical clindamycin | 55 | 53 | 12 | 19 | 85/37/48 |
| Olafsson, 1989 | oral doxycycline (50 mg bid-qd) vs oral minocycline (50mg bid-qd) | Oral doxycycline vs Oral minocycline | 79 | 56 | 12 | 21 | 74/50/43 |
| Cunliffe, 1989 | AA (20% bid) vs placebo (bid) | AA vs Placebo | 40 | 35 | 12 | na | na/na/na/ |
| Swinyer, 1988 | topical clindamycin (1% bid) vs BPO (5% bid) | Topical clindamycin vs BPO | 60 | 57 | 12 | 20 | 89/24/65 |
| Harrison, 1988 | oral doxycycline (50 mg qd) vs oral minocycline (50 mg bid) | Oral doxycycline vs Oral minocycline | 43 | 49 | 12 | 20 | 51/na/na |
| Elbaum, 1988 | topical tretinoin (0.05% qd-bid) vs topical isotretinoin (0.05% qd-bid) | Topical tretinoin vs Topical isotretinoin | 16 | na | 12 | na | na/na/na/ |
| Leyden, 1987 | topical clindamycin (1% bid) vs topical erythromycin (2% bid) | Topical clindamycin vs Topical erythromycin | 102 | 49 | 12 | 19 | 46/18/28 |
| Katsambas, 1987 | oral tetracycline (500 mg bid) vs topical clindamycin (1% qd) | Oral tetracycline vs Topical clindamycin | 60 | 95 | 12 | na | 71/45/25 |
| Chalker, 1987 | topical isotretinoin (0.05% bid) vs placebo (bid) | Topical isotretinoin vs placebo | 313 | 42 | 14 | 20 | 68/29/39 |
| Bladon, 1986 | oral tetracycline (250 mg qd) vs AA (20% bid) | Oral tetracycline vs AA | 45 | na | 24 | 19 | 86/44/42 |
| Kuhlman, 1986 | topical clindamycin (1% bid) vs placebo (bid) | Topical clindamycin vs Placebo | 46 | na | 12 | na | 40/26/14 |
| Mills, 1986 | BPO (2.5% bid) vs placebo (bid) | BPO vs Placebo | 50 | 52 | 8 | na | na/14/na |
| Carlborg, 1986 | EE/CPA (50ug/2mg 21/7 cycles) vs EE/CPA (35ug/2mg 21/7 cycles) vs | EE/CPA vs EE/LNG | 133 | 100 | 24 | na | na/na/na |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | EE/LNG (30ug/150ug 21/7 cycles) | | | | | | |
| Pigatto, 1986 | oral minocycline (50-100 mg qd) vs oral isotretinoin (0.5-1 mg/kg/day) | Oral minocycline vs Oral isotretinoin | 24 | 0 | 20 | 23 | na/20/na |
| Lesher, 1985 | topical erythromycin (2% bid) vs placebo (bid) | Topical erythromycin vs Placebo | 225 | 37 | 12 | 19 | na/25/na |
| Greenwood, 1985 | oral tetracycline (500 mg qd) vs EE/CPA (50ug/2mg 21/7 cycles) vs oral tetracycline/EE/CPA (500mg/50ug/2mg qd and 21/7cycles) | Oral tetracycline vs EE/CPA | 92 | 100 | 24 | na | na/na/na |
| Lester, 1985 | oral tetracycline (500-1000 mg/day) vs oral isotretinoin (1.0-2.0 mg/kg/day) | Oral tetracycline vs Oral isotretinoin | 30 | 3 | 16 | 25 | 44/na/na |
| Tucker, 1984 | topical clindamycin (1% bid) vs topical clindamycin/BPO (1%/5% qd) vs BPO (5% bid) | Topical clindamycin vs Topical clindamycin/BPO vs BPO | 79 | 57 | 10 | na | 80/30/51 |
| Burke, 1983 | topical erythromycin (1.5% bid) vs BPO (5% bid) vs placebo (bid) | Topical erythromycin vs BPO vs Placebo | 89 | 21 | 8 | 19 | 52/19/33 |
| Chalker, 1983 | topical erythromycin (3% bid) vs topical erythromycin/BPO (3%/5% bid) vs BPO (5% bid) vs placebo (bid) | Topical erythromycin vs Topical erythromycin/BPO vs BPO vs Placebo | 165 | 41 | 10 | na | na/na/na |
| Gratton, 1982 | oral tetracycline (250 mg bid) vs topical clindamycin (1% bid) vs Placebo (bid) | Oral tetracycline vs Topical clindamycin vs Placebo | 305 | na | 8 | na | na/68/na |
| Peck, 1982 | oral isotretinoin (0.5-1.0 mg/kg/day qd) vs placebo (qd) | Oral isotretinoin vs Placebo | 33 | na | 16 | na | na/na/na |
| Jones, 1981 | topical erythromycin (2% bid) vs placebo (bid) | Topical erythromycin vs Placebo | 175 | 57 | 12 | na | na/25/na |
| Feucht, 1980 | oral tetracycline (250 mg bid) vs topical erythromycin/Zn (4%/1.2% bid) vs placebo bid | Oral tetracycline vs Topical erythromycin/Zn vs Placebo | 141 | 0 | 10 | na | 49/16/33 |
| Bernstein, 1980 | topical erythromycin (2% bid) vs placebo (bid) | Topical erythromycin vs Placebo | 348 | 70 | 8 | 20 | 48/24/24 |
| Swinyer, 1980 | oral tetracycline (250 mg bid) vs topical tretinoin/BPO | Oral tetracycline vs Topical retinoid/BPO vs | 122 | 26 | 16 | 18 | 174/29/145 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | (0.05%/5% qd/bid-tid) vs oral tetracycline/topical tretinoin (250 mg/0.05% bid/qd) | Oral Abx/topical retinoid | | | | | |
| Lyons, 1978 | topical tretinoin (0.1% qd-bid) vs BPO (5%-10% qd-bid) | Topical tretinoin vs BPO | 147 | 73 | 8 | 19 | 37/12/25 |
| Bucknall, 1977 | topical tretinoin (0.025% bid) vs BPO (5% bid | Topical tretinoin vs BPO | 97 | na | 12 | na | 83/52/31 |
| Plewig, 1970 | oral doxycycline (100 mg bid) vs placebo (bid) | Oral doxycycline vs Placebo | 62 | 29 | 4 | 19 | na/13/na |

Full references for all trials are given in the appendix.
Details of treatment nodes are described in Table S3.
Abbreviation: qd, once daily; bid, twice a day; BPO, benzoyl peroxide; AA, azelaic acid; Abx, antibiotics; EE, ethinylestradiol; LNG, levonorgestrel; DRSP, drospirenone; DSG, desogestrel; NGM, norgestimate; CMA, chlormadinone acetate; CPA, cyproterone acetate; na, not available

**Supplemental Table 4. Intervention Nodes Included in the Network Meta-Analysis**

| **For Primary Analysis** | |
|---|---|
| **Treatment Nodes** | **Contents** |
| **Oral tetracycline** | Oral tetracycline |
| **Oral doxycycline** | Oral doxycycline |
| **Oral lymecycline** | Oral lymecycline |
| **Oral minocycline** | Oral minocycline |
| **Oral azithromycin** | Oral azithromycin |
| **Oral sarecycline** | Oral sarecycline |
| **Topical clindamycin** | Topical clindamycin |
| **Topical clindamycin/BPO** | Topical clindamycin + topical benzoyl peroxide |
| **Topical erythromycin** | Topical erythromycin |
| **Topical erythromycin/BPO** | Topical erythromycin + topical benzoyl peroxide |
| **Topical erythromycin/Zn** | Topical erythromycin + topical zinc |
| **Topical nadifloxacin** | Topical nadifloxacin |
| **Topical nadifloxacin/BPO** | Topical nadifloxacin + topical benzoyl peroxide |
| **Topical minocycline** | Topical minocycline |
| **Topical Abx/AA** | (Topical clindamycin or topical erythromycin or topical nadifloxacin or topical minocycline) + topical azelaic acid |
| **Oral isotretinoin** | Oral isotretinoin |
| **Topical isotretinoin** | Topical isotretinoin |
| **Topical tretinoin** | Topical tretinoin |
| **Topical tazarotene** | Topical tazarotene |
| **Topical adapalene** | Topical adapalene |
| **Topical trifarotene** | Topical trifarotene |
| **Topical retinoid/BPO** | (Topical isotretinoin or topical tretinoin or topical tazarotene or topical adapalene or topical trifarotene) + topical benzoyl peroxide |
| **Topical Abx/1st retinoid** | (Topical clindamycin or topical erythromycin or topical nadifloxacin or topical minocycline) + (topical isotretinoin or topical tretinoin) |

| | |
|---|---|
| **Topical Abx/2nd retinoid** | (Topical clindamycin or topical erythromycin or topical nadifloxacin or topical minocycline) + (topical tazarotene or topical adapalene) |
| **Topical Abx/retinoid/BPO** | (Topical clindamycin or topical erythromycin or topical nadifloxacin or topical minocycline) + (topical isotretinoin or topical tretinoin or topical tazarotene or topical adapalene or topical trifarotene) + topical benzoyl peroxide |
| **Oral Abx/topical retinoid** | (Oral tetracycline or oral doxycycline or oral lymecycline or oral minocycline or oral azithromycin or oral sarecycline) + (Topical isotretinoin or topical tretinoin or topical tazarotene or topical adapalene or topical trifarotene) |
| **Oral Abx/topical retinoid/BPO** | (Oral tetracycline or oral doxycycline or oral lymecycline or oral minocycline or oral azithromycin or oral sarecycline) + (Topical isotretinoin or topical tretinoin or topical tazarotene or topical adapalene or topical trifarotene) + topical benzoyl peroxide |
| **EE/LNG** | Oral ethinylestradiol / levonorgestrel |
| **EE/DRSP** | Oral ethinylestradiol / drospirenone |
| **EE/DSG** | Oral ethinylestradiol / desogestrel |
| **EE/NGM** | Oral ethinylestradiol / norgestimate |
| **EE/CMA** | Oral ethinylestradiol / chlormadinone acetate |
| **EE/CPA** | Oral ethinylestradiol / cyproterone acetate |
| **Topical clascoterone** | Topical clascoterone |
| **BPO** | Topical benzoyl peroxide |
| **AA** | Topical azelaic acid |
| **Placebo** | Oral placebo or topical placebo |

**For Sensitivity Analysis with Simplified Treatment Nodes**

| **Treatment Nodes** | **Contents** |
|---|---|
| **Oral Abx** | Oral tetracycline or oral doxycycline or oral lymecycline or oral minocycline or oral azithromycin |
| **Topical Abx** | Topical clindamycin or topical erythromycin or topical nadifloxacin or topical minocycline |
| **Topical Abx/BPO** | (Topical clindamycin or topical erythromycin or topical nadifloxacin or topical minocycline) + topical benzoyl peroxide |
| **Topical Abx/AA** | (Topical clindamycin or topical erythromycin or topical nadifloxacin or topical minocycline) + topical azelaic acid |
| **Oral isotretinoin** | Oral isotretinoin |
| **Topical retinoid** | Topical isotretinoin or topical tretinoin or topical tazarotene or topical adapalene or topical trifarotene |
| **Topical retinoid/BPO** | (Topical isotretinoin or topical tretinoin or topical tazarotene or topical adapalene or topical trifarotene) + topical benzoyl peroxide |

| | |
|---|---|
| **Topical Abx/retinoid** | (Topical clindamycin or topical erythromycin or topical nadifloxacin or topical minocycline) + (topical isotretinoin or topical tretinoin or topical tazarotene or topical adapalene or topical trifarotene) |
| **Topical Abx/retinoid/BPO** | (Topical clindamycin or topical erythromycin or topical nadifloxacin or topical minocycline) + (topical isotretinoin or topical tretinoin or topical tazarotene or topical adapalene or topical trifarotene) + topical benzoyl peroxide |
| **Oral Abx/topical retinoid** | (Oral tetracycline or oral doxycycline or oral lymecycline or oral minocycline or oral azithromycin or oral sarecycline) + (Topical isotretinoin or topical tretinoin or topical tazarotene or topical adapalene or topical trifarotene) |
| **Oral Abx/topical retinoid/BPO** | (Oral tetracycline or oral doxycycline or oral lymecycline or oral minocycline or oral azithromycin or oral sarecycline) + (Topical isotretinoin or topical tretinoin or topical tazarotene or topical adapalene or topical trifarotene) + topical benzoyl peroxide |
| **COC** | Oral ethinylestradiol / levonorgestrel or oral ethinylestradiol / drospirenone or oral ethinylestradiol / desogestrel or oral ethinylestradiol / norgestimate or oral ethinylestradiol / chlormadinone acetate or oral ethinylestradiol / cyproterone acetate |
| **Topical antiandrogen** | Topical clascoterone |
| **BPO** | Topical benzoyl peroxide |
| **AA** | Topical azelaic acid |
| **Placebo** | Oral placebo or topical placebo |

**Supplemental Table 5. Quality Assessment of Included Trials**

| Study | Was the study randomized? | Was the randomization scheme described and appropriate? | Were the investigators blinded? | Were the participants blinded? | Were the missing data unlikely to bias the result? | Quality score |
|---|---|---|---|---|---|---|
| Stein Gold, 2022 | 1 | 1 | 1 | 1 | 1 | 5 |
| Aschoff, 2021 | 1 | 1 | 1 | 0 | 1 | 4 |
| Raoof, 2020 | 1 | 0 | 1 | 1 | 0 | 3 |
| Sayyafan, 2020 | 1 | 0 | 1 | 1 | 0 | 3 |
| Webster, 2020 | 1 | 0 | 1 | 1 | 0 | 3 |
| Tanghetti, 2020 | 1 | 1 | 1 | 1 | 1 | 5 |
| Dogra, 2020 | 1 | 1 | 1 | 1 | 1 | 5 |
| Hebert, 2020 (1) | 1 | 1 | 1 | 1 | 1 | 5 |
| Hebert, 2020 (2) | 1 | 1 | 1 | 1 | 1 | 5 |
| Gold, 2019 | 1 | 0 | 1 | 1 | 1 | 4 |
| Tanghetti, 2019 | 1 | 0 | 1 | 1 | 1 | 4 |
| Tan, 2019 (1) | 1 | 0 | 1 | 1 | 1 | 4 |
| Tan, 2019 (2) | 1 | 0 | 1 | 1 | 1 | 4 |
| Mazzetti, 2019 | 1 | 0 | 1 | 1 | 0 | 3 |
| Alexis, 2018 | 1 | 0 | 1 | 1 | 1 | 4 |
| Leyden, 2018 | 1 | 1 | 1 | 1 | 1 | 5 |
| Moore, 2018 (1) | 1 | 0 | 1 | 1 | 1 | 4 |
| Moore, 2018 (2) | 1 | 0 | 1 | 1 | 1 | 4 |
| Tyring, 2018 | 1 | 0 | 1 | 1 | 1 | 4 |
| Dreno, 2018 | 1 | 1 | 1 | 0 | 1 | 4 |
| Hayashi, 2018 | 1 | 1 | 1 | 0 | 1 | 4 |
| Ghosh, 2018 | 1 | 0 | 0 | 0 | 1 | 2 |
| Jaisamrarn, 2018 | 1 | 1 | 1 | 0 | 1 | 4 |
| Dreno, 2017 | 1 | 1 | 1 | 0 | 1 | 4 |
| Kawashima, 2017 | 1 | 1 | 1 | 1 | 1 | 5 |
| Shemer, 2016 | 1 | 0 | 1 | 1 | 0 | 3 |
| Richter, 2016 | 1 | 1 | 1 | 0 | 1 | 4 |
| Shaller, 2016 | 1 | 1 | 1 | 0 | 1 | 4 |
| Xu, 2016 | 1 | 1 | 1 | 0 | 1 | 4 |
| Stein Gold, 2016 | 1 | 1 | 1 | 1 | 1 | 5 |
| Jawade, 2016 | 1 | 0 | 1 | 0 | 0 | 2 |
| Kawashima, 2015 | 1 | 1 | 1 | 0 | 1 | 4 |
| Moore, 2015 | 1 | 0 | 1 | 1 | 0 | 3 |
| Weiss, 2015 | 1 | 1 | 1 | 1 | 1 | 5 |
| Thielitz, 2015 | 1 | 1 | 1 | 0 | 1 | 4 |

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|---|---|---|---|---|---|---|
| Kaur, 2015 | 1 | 0 | 0 | 0 | 1 | 2 |
| Pariser, 2014 | 1 | 1 | 1 | 1 | 1 | 5 |
| Ocampo-Candiani, 2014 | 1 | 1 | 1 | 0 | 0 | 3 |
| Adhikary, 2014 | 1 | 0 | 0 | 0 | 1 | 2 |
| Shwetha, 2014 | 1 | 1 | 0 | 0 | 1 | 3 |
| Kawashima, 2014 | 1 | 1 | 1 | 1 | 1 | 5 |
| Jaisamrarn, 2014 | 1 | 1 | 1 | 0 | 1 | 4 |
| Tan, 2014 | 1 | 1 | 1 | 0 | 1 | 4 |
| Rademaker, 2014 | 1 | 1 | 1 | 1 | 0 | 4 |
| Ozgen, 2013 | 1 | 1 | 1 | 1 | 0 | 4 |
| Feldman, 2013 (1) | 1 | 1 | 1 | 1 | 1 | 5 |
| Feldman, 2013 (2) | 1 | 1 | 1 | 1 | 1 | 5 |
| Leyden, 2013 | 1 | 0 | 1 | 1 | 1 | 4 |
| Kim, 2013 | 1 | 0 | 1 | 0 | 1 | 3 |
| Eichenfield, 2013 | 1 | 0 | 1 | 1 | 1 | 4 |
| Tirado-Sánchez, 2013 | 1 | 0 | 1 | 1 | 1 | 4 |
| Babaeinejad, 2013 | 1 | 1 | 1 | 1 | 1 | 5 |
| Nandimath, 2013 | 1 | 0 | 0 | 0 | 0 | 1 |
| Takigawa, 2013 | 1 | 0 | 0 | 0 | 1 | 2 |
| Palli, 2013 | 1 | 1 | 1 | 1 | 0 | 4 |
| Turan, 2012 | 1 | 0 | 0 | 0 | 0 | 1 |
| Eichenfield, 2012 | 1 | 1 | 1 | 1 | 1 | 5 |
| Gonzalez, 2012 | 1 | 1 | 1 | 0 | 1 | 4 |
| Callender, 2012 | 1 | 0 | 1 | 1 | 1 | 4 |
| Guerra-Tapia, 2012 | 1 | 1 | 1 | 0 | 1 | 4 |
| Draelos, 2012 | 1 | 0 | 1 | 1 | 0 | 3 |
| Jarratt, 2012 | 1 | 1 | 1 | 1 | 1 | 5 |
| Eichenfielda, 2011 | 1 | 0 | 1 | 1 | 1 | 4 |
| Pazoki-Toroudi, 2011 | 1 | 0 | 1 | 1 | 0 | 3 |
| Maleszka, 2011 | 1 | 0 | 1 | 1 | 1 | 4 |
| Hajheydari, 2011 | 1 | 0 | 1 | 1 | 0 | 3 |
| Choudhury, 2011 | 1 | 1 | 1 | 0 | 1 | 4 |
| Schmidt, 2011 | 1 | 0 | 1 | 1 | 1 | 4 |
| Kobayashi, 2011 | 1 | 1 | 0 | 0 | 0 | 2 |
| Dreno, 2011 | 1 | 1 | 1 | 1 | 1 | 5 |
| Trifu, 2011 | 1 | 0 | 1 | 1 | 1 | 4 |
| Pazoki-Toroudi, 2010 | 1 | 0 | 1 | 1 | 0 | 3 |
| Tunca, 2010 | 1 | 1 | 0 | 0 | 0 | 2 |
| Tanghetti, 2010 | 1 | 0 | 1 | 0 | 1 | 3 |

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|---|---|---|---|---|---|---|
| Eichenfield, 2010 | 1 | 1 | 1 | 0 | 0 | 3 |
| Gold, 2010 | 1 | 0 | 1 | 1 | 1 | 4 |
| Jackson, 2010 | 1 | 0 | 1 | 0 | 1 | 3 |
| Kircik, 2009 | 1 | 0 | 1 | 0 | 0 | 2 |
| Stein Gold, 2009 | 1 | 0 | 1 | 1 | 1 | 4 |
| Gollnick, 2009 | 1 | 0 | 1 | 1 | 1 | 4 |
| Webster, 2009 | 1 | 0 | 1 | 0 | 0 | 2 |
| Zouboulis, 2009 | 1 | 0 | 1 | 0 | 1 | 3 |
| Nilfroushzadeh, 2009 | 1 | 0 | 1 | 0 | 1 | 3 |
| Ko, 2009 | 1 | 0 | 0 | 0 | 0 | 1 |
| Kircik, Green, 2009 | 1 | 0 | 1 | 0 | 1 | 3 |
| Iftikhar, 2009 | 1 | 1 | 0 | 0 | 0 | 2 |
| Palombo-Kinne, 2009 | 1 | 0 | 1 | 1 | 1 | 4 |
| Plewig, 2009 | 1 | 0 | 1 | 1 | 0 | 3 |
| Thiboutot, 2008 | 1 | 1 | 1 | 1 | 1 | 5 |
| Tanghetti, 2008 | 1 | 0 | 1 | 0 | 1 | 3 |
| Kawashima, 2008 | 1 | 0 | 1 | 0 | 1 | 3 |
| Langner, 2008 | 1 | 1 | 1 | 0 | 1 | 4 |
| Koltun, 2008 | 1 | 1 | 1 | 1 | 0 | 4 |
| Maloney, 2008 | 1 | 1 | 1 | 1 | 0 | 4 |
| Berger, 2007 | 1 | 0 | 1 | 1 | 1 | 4 |
| Oprica, 2007 | 1 | 1 | 0 | 0 | 1 | 3 |
| Thiboutot, 2007 | 1 | 0 | 1 | 1 | 1 | 4 |
| Ghoshal, 2007 | 1 | 0 | 0 | 0 | 1 | 2 |
| Tanghetti, 2007 | 1 | 0 | 1 | 0 | 1 | 3 |
| Del Rosso, 2007 | 1 | 0 | 0 | 0 | 0 | 1 |
| Schlessinger, 2007 | 1 | 0 | 1 | 1 | 0 | 3 |
| Langner, 2007 | 1 | 1 | 1 | 0 | 1 | 4 |
| Iraji, 2007 | 1 | 0 | 1 | 1 | 0 | 3 |
| Stinco, 2007 | 1 | 0 | 0 | 0 | 1 | 2 |
| Webster, 2006 (1) | 1 | 0 | 1 | 1 | 0 | 3 |
| Webster, 2006 (2) | 1 | 0 | 1 | 1 | 0 | 3 |
| Webster, 2006 (3) | 1 | 0 | 1 | 1 | 0 | 3 |
| Webster, 2006 (4) | 1 | 0 | 1 | 1 | 0 | 3 |
| Stewart, 2006 | 1 | 0 | 1 | 1 | 1 | 4 |
| Fleischer, 2006 | 1 | 0 | 1 | 1 | 1 | 4 |
| Plewig, 2006 | 1 | 1 | 1 | 1 | 1 | 5 |
| Thiboutot, 2006 | 1 | 0 | 1 | 1 | 1 | 4 |
| Tanghetti, 2006 | 1 | 0 | 1 | 1 | 0 | 3 |
| Leyden J.J., 2006 | 1 | 1 | 1 | 1 | 1 | 5 |

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|---|---|---|---|---|---|---|
| Alirezaï, 2005 | 1 | 0 | 1 | 0 | 1 | 3 |
| Shalita, Myers, 2005 | 1 | 0 | 1 | 1 | 1 | 4 |
| Kus, 2005 | 1 | 1 | 1 | 0 | 1 | 4 |
| Korkut, 2005 | 1 | 0 | 0 | 0 | 0 | 1 |
| Shalita, Miller, 2005 | 1 | 0 | 1 | 1 | 0 | 3 |
| Bowman, 2005 | 1 | 1 | 1 | 0 | 1 | 4 |
| Thiboutot, 2005 | 1 | 0 | 1 | 0 | 1 | 3 |
| Pariser, 2005 | 1 | 0 | 1 | 0 | 1 | 3 |
| Gollnick, 2004 (1) | 1 | 0 | 1 | 1 | 0 | 3 |
| Gollnick, 2004 (2) | 1 | 0 | 1 | 0 | 0 | 2 |
| Ozolins, 2004 | 1 | 1 | 1 | 0 | 1 | 4 |
| Peker, 2004 | 1 | 0 | 0 | 0 | 1 | 2 |
| Leyden, 2004 | 1 | 0 | 1 | 1 | 0 | 3 |
| Shalita, 2004 | 1 | 1 | 1 | 1 | 1 | 5 |
| Zhang, 2004 | 1 | 0 | 1 | 0 | 1 | 3 |
| Thorneycroft, 2004 | 1 | 1 | 1 | 1 | 1 | 5 |
| Bossuyt, 2003 | 1 | 0 | 1 | 0 | 1 | 3 |
| Dubertret, 2003 | 1 | 0 | 1 | 1 | 1 | 4 |
| Skidmore, 2003 | 1 | 0 | 1 | 1 | 1 | 4 |
| Do Nascimento, 2003 | 1 | 1 | 1 | 0 | 1 | 4 |
| Wolf, 2003 | 1 | 0 | 1 | 0 | 1 | 3 |
| Cunliffe, 2003 | 1 | 0 | 1 | 0 | 1 | 3 |
| Gupta, 2003 | 1 | 1 | 1 | 1 | 0 | 4 |
| Rosen, 2003 | 1 | 1 | 1 | 1 | 0 | 4 |
| Cunliffe, 2002 | 1 | 0 | 1 | 1 | 0 | 3 |
| Jones, 2002 | 1 | 0 | 1 | 1 | 0 | 3 |
| Thiboutot, 2002 | 1 | 0 | 1 | 1 | 0 | 3 |
| Piérard-Franchimont, 2002 | 1 | 0 | 1 | 1 | 0 | 3 |
| Bershad, 2002 | 1 | 0 | 1 | 0 | 1 | 3 |
| Webster, 2002 | 1 | 1 | 1 | 1 | 1 | 5 |
| Aydin, 2002 | 1 | 0 | 0 | 0 | 1 | 2 |
| Ioannides, 2002 | 1 | 1 | 0 | 0 | 1 | 3 |
| Marazzi, 2002 | 1 | 0 | 1 | 0 | 0 | 2 |
| Leyden, 2002 | 1 | 1 | 1 | 1 | 0 | 4 |
| Ergin, 2001 | 1 | 0 | 1 | 1 | 0 | 3 |
| Tschen, 2001 | 1 | 0 | 1 | 1 | 0 | 3 |
| Nyirady , 2001 | 1 | 0 | 1 | 1 | 1 | 4 |
| Tu, 2001 | 1 | 0 | 0 | 0 | 0 | 1 |
| Leyden, Lowe, 2001 | 1 | 1 | 1 | 1 | 1 | 5 |

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|---|---|---|---|---|---|---|
| Leyden, Hickman, 2001 | 1 | 0 | 1 | 0 | 1 | 3 |
| Leyden, Berger, 2001 | 1 | 0 | 1 | 1 | 1 | 4 |
| Triboutot, 2001 | 1 | 1 | 1 | 1 | 0 | 4 |
| Vartiainen, 2001 | 1 | 0 | 0 | 0 | 1 | 2 |
| Worret, 2001 | 1 | 0 | 1 | 0 | 0 | 2 |
| Langner, 2000 | 1 | 0 | 1 | 1 | 1 | 4 |
| Zouboulis, 2000 | 1 | 1 | 1 | 0 | 1 | 4 |
| Shalita, 1999 | 1 | 0 | 1 | 1 | 1 | 4 |
| Piérard-Franchimont, 1999 | 1 | 0 | 1 | 1 | 1 | 4 |
| Glass, 1999 | 1 | 1 | 1 | 1 | 1 | 5 |
| Gruber, 1998 | 0 | 0 | 0 | 0 | 1 | 1 |
| Grosshan, Belaich, 1998 | 1 | 0 | 1 | 1 | 1 | 4 |
| Ellis, 1998 | 1 | 0 | 1 | 0 | 0 | 2 |
| Grosshans, Marks, 1998 | 1 | 1 | 1 | 0 | 1 | 4 |
| Richter, Förström, 1998 | 1 | 0 | 1 | 1 | 1 | 4 |
| Richter, Bousema, 1998(1) | 1 | 0 | 1 | 0 | 0 | 2 |
| Richter, Bousema, 1998(2) | 1 | 0 | 1 | 1 | 0 | 3 |
| Lookingbill, 1997 | 1 | 0 | 1 | 1 | 0 | 3 |
| Chu, 1997 | 1 | 0 | 1 | 0 | 0 | 2 |
| Cunliffe, 1997 | 1 | 0 | 1 | 0 | 1 | 3 |
| Lucky, 1997 | 1 | 1 | 1 | 1 | 0 | 4 |
| Redmond, 1997 | 1 | 1 | 1 | 1 | 0 | 4 |
| Packman, 1996 | 1 | 0 | 1 | 0 | 1 | 3 |
| Sklar, 1996 | 1 | 1 | 1 | 0 | 0 | 3 |
| Shalita, 1996 | 1 | 1 | 1 | 0 | 1 | 4 |
| Goujon, 1995 | 1 | 1 | 1 | 0 | 1 | 4 |
| Fonseca, 1995 | 1 | 0 | 1 | 1 | 0 | 3 |
| Bojar, 1994 | 1 | 0 | 0 | 0 | 0 | 1 |
| Dieben, 1994 | 1 | 0 | 0 | 0 | 0 | 1 |
| Stainforth, 1993 | 1 | 0 | 1 | 0 | 1 | 3 |
| DeVillez, 1992 | 1 | 0 | 1 | 0 | 1 | 3 |
| Hughes, 1992 | 1 | 0 | 1 | 1 | 1 | 4 |
| Norris, 1991 | 1 | 0 | 1 | 1 | 1 | 4 |
| Wishart, 1991 | 1 | 0 | 0 | 0 | 1 | 2 |

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|---|---|---|---|---|---|---|
| Schachner, 1990 | 1 | 0 | 1 | 1 | 1 | 4 |
| Hjorth, 1989 (1) | 1 | 0 | 1 | 1 | 0 | 3 |
| Hjorth, 1989 (1) | 1 | 0 | 1 | 1 | 0 | 3 |
| Katsambas, 1989 (1) | 1 | 0 | 1 | 1 | 1 | 4 |
| Katsambas, 1989 (2) | 1 | 0 | 1 | 1 | 0 | 3 |
| Pastrana-Ruiz, 1989 | 1 | 0 | 1 | 1 | 1 | 4 |
| Olafsson, 1989 | 1 | 0 | 1 | 1 | 1 | 4 |
| Cunliffe, 1989 | 1 | 1 | 1 | 1 | 0 | 4 |
| Swinyer, 1988 | 1 | 0 | 1 | 0 | 1 | 3 |
| Harrison, 1988 | 1 | 0 | 1 | 0 | 1 | 3 |
| Elbaum, 1988 | 1 | 0 | 1 | 1 | 0 | 3 |
| Leyden, 1987 | 1 | 0 | 1 | 0 | 1 | 3 |
| Katsambas, 1987 | 1 | 0 | 1 | 1 | 0 | 3 |
| Chalker, 1987 | 1 | 0 | 1 | 1 | 1 | 4 |
| Bladon, 1986 | 1 | 0 | 1 | 1 | 0 | 3 |
| Kuhlman, 1986 | 1 | 0 | 1 | 1 | 0 | 3 |
| Mills, 1986 | 1 | 0 | 1 | 1 | 1 | 2 |
| Carlborg, 1986 | 1 | 0 | 1 | 1 | 0 | 3 |
| Pigatto, 1986 | 1 | 0 | 0 | 0 | 0 | 1 |
| Lesher, 1985 | 1 | 0 | 1 | 1 | 0 | 3 |
| Greenwood, 1985 | 1 | 0 | 1 | 1 | 0 | 3 |
| Lester, 1985 | 1 | 0 | 1 | 1 | 0 | 3 |
| Tucker, 1984 | 1 | 0 | 1 | 0 | 0 | 2 |
| Burke, 1983 | 1 | 0 | 1 | 1 | 0 | 3 |
| Chalker, 1983 | 1 | 0 | 1 | 1 | 1 | 4 |
| Gratton, 1982 | 1 | 0 | 1 | 1 | 0 | 3 |
| Peck, 1982 | 1 | 1 | 1 | 1 | 0 | 4 |
| Jones, 1981 | 1 | 0 | 1 | 1 | 0 | 3 |
| Feucht, 1980 | 1 | 1 | 1 | 1 | 1 | 5 |
| Bernstein, 1980 | 1 | 0 | 1 | 1 | 0 | 3 |
| Swinyer, 1980 | 1 | 0 | 1 | 1 | 1 | 4 |
| Lyons, 1978 | 1 | 1 | 0 | 0 | 1 | 3 |
| Bucknall, 1977 | 1 | 0 | 1 | 0 | 0 | 2 |
| Plewig, 1970 | 1 | 0 | 1 | 1 | 0 | 3 |

Full references for all trials are given below.

Criteria for quality assessment is described in Suppl Table 2.

**References for included trials**

The references [1-210] are ordered by years of publication, identical to Table 1.


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