Measurement properties of MDA criteria

Supplementary Table S1: Summary of study characteristics

| Author (Year) | Study Years | Study Type | Experimental Treatment | Country | Sample Size | Gender (n, % male) | Mean Duration of PsA, Years (SD) | Mean Age, Years (SD) |
|---|---|---|---|---|---|---|---|---|
| Coates et al. (2010)[26] | 2003 to 2007 | Prospective longitudinal observational | N/A | Canada | MDA = 116 | MDA = 76 (66%) | MDA = 6.6 | MDA = 40 |
| | | | | | non-MDA = 228 | non-MDA = 128 (56%) | non-MDA = 6.8 | Non-MDA = 44 |
| Coates & Helliwell (2010)[22] | — | Post-hoc analysis of RCT, placebo | Infliximab | UK | 220 | — | — | — |
| Coates & Helliwell (2016)[32] | — | Prospective longitudinal observational | N/A | World wide | 503 | 286 (57%) | 8.9 | 50.8 |
| Coates et al. (2016a)[30] | — | RCT, placebo | Secukinumab | World wide | 397 | NR | NR | NR |
| Geijer et al. (2015)[27] | — | Prospective longitudinal observational | N/A | Sweden | 72 | 29 (40%) | 1* | 47.8 (14.7) |
| Gladman et al. (2017)[40] | 2013 to 2016 | RCT, placebo | Tofacitinib | World wide | 394 | Tofacitinib 5 mg = 67 (51%) | Tofacitinib 5 mg = 9.6 (7.6) | Tofacitinib 5 mg = 49.5 (12.3) |
| | | | | | | Tofacitinib 10 mg = 58 (44%) | Tofacitinib 10 mg = 9.1 (6.8) | Tofacitinib 10 mg = 51.3 (10.9) |
| | | | | | | Placebo = 51 (39%) | Placebo = 9.4 (8.1) | Placebo = 49.0 (12.6) |
| Kavanaugh et al. (2016)[28] | — | Post-hoc Analysis of RCT, placebo | Golimumab | USA | 395 | — | — | — |
| Lubrano et al. (2015)[34] | 2012 to 2015 | Prospective longitudinal observational | N/A | Italy | 124 | 58 (47%) | 7 | 52 |

Measurement properties of MDA criteria

| Author (Year) | Study Years | Study Type | Experimental Treatment | Country | Sample Size | Gender (n, % male) | Mean Duration of PsA, Years (SD) | Mean Age, Years (SD) |
|---|---|---|---|---|---|---|---|---|
| Lubrano et al. (2017)[35] | 2016 | Cross-sectional analysis of longitudinal observational study | N/A | Italy | 109 | bDmARD = 41 (52%) | bDmARD = 7.8 (9.3) | bDmARD = 52.7 (12.4) |
| | | | | | | csDMARD = 14 (47%) | csDMARD = 6.6 (8.2) | csDMARD = 51.6 (12.3) |
| Mease et al. (2013)[46] | — | Post-hoc analysis of RCT, placebo | Adalimumab | USA | 313 | Placebo = 39 (57%) | Placebo = NR | Placebo = 48 (12) |
| | | | | | | Adalimumab = 38 (57%) | Adalimumab = NR | Adalimumab = 50 (14) |
| Mease et al. (2014)[41] | 2010 to 2011 | RCT, placebo | Certolizumab Pegol | Global | 409 | Placebo = 42% | Placebo = 7.9 (7.7) | Placebo = 47.3 (11.1) |
| | | | | | | Certolizumab pegol 200 mg = 46% | Certolizumab pegol 200 mg = 9.6 (8.5) | Certolizumab pegol 200 mg = 48.2 (12.3) |
| | | | | | | Certolizumab Pegol 400 mg = 46% | Certolizumab Pegol 400 mg = 8.1 (8.3) | Certolizumab Pegol 400 mg = 47.1 (10.8) |
| Mease et al. (2015)[42] | 2010 to 2011 | Interim analysis of dose-blind and open-label extension of RCT, placebo | Certolizumab Pegol | Country | Results summarized only for n=273 randomized to active treatment at baseline | NR | NR | NR |
| Mease et al. (2017b)[19] | 2013 to 2016 | RCT, placebo with open-label extension | Abatacept | World wide | 424 | Placebo = 99 (47%) | Placebo = 8.8 (8.3) | Placebo = 49.8 (11.3) |
| | | | | | | Abatacept = 92 (43%) | Abatacept = 8.3 (8.1) | Abatacept = 51.0 (10.7) |

Measurement properties of MDA criteria

| Author (Year) | Study Years | Study Type | Experimental Treatment | Country | Sample Size | Gender (n, % male) | Mean Duration of PsA, Years (SD) | Mean Age, Years (SD) |
|---|---|---|---|---|---|---|---|---|
| Mease et al. (2017a)[31] | 2003 to 2004 | Post-hoc analysis of a RCT, placebo | Adalimumab | NR | 135 (subset of study participants) | NR | NR | NR |
| Mease et al. (2017c)[43] | 2014 to 2015 | RCT, placebo | Tofacitinib and Adalimumab | World wide | 422 | Placebo = 49 (47%) | Placebo = 6.4 (6.4) | Placebo = 47.7 (12.3) |
| | | | | | | Tofacitinib 5 mg = 50 (47%) | Tofacitinib 5 mg = 7.3 (8.2) | Tofacitinib 5 mg = 49.4 (12.6) |
| | | | | | | Tofacitinib 10 mg = 42 (40%) | Tofacitinib 10 mg = 5.4 (5.8) | Tofacitinib 10 mg = 46.9 (12.4) |
| | | | | | | Adalimumab = 56 (53%) | Adalimumab = 5.3 (5.3) | Adalimumab = 47.4 (11.3) |
| Nash et al. (2017)[44] | 2015 to 2016 | RCT, placebo | Ixekizumab | World wide | 363 | Placebo = 56 (47%) | Placebo = 9.2 (7.3) | Placebo = 51.5 (10.4) |
| | | | | | | Ixekizumab 4 weeks = 63 (52%) | Ixekizumab 4 weeks = 11.0 (9.6) | Ixekizumab 4 weeks = 52.6 (13.6) |
| | | | | | | Ixekizumab 2 weeks = 50 (41%) | Ixekizumab 2 weeks = 9.9 (7.4) | Ixekizumab 2 weeks = 51.7 (11.9) |
| Perrotta et al. (2016)[36] | 2012 to 2014 | Prospective long-term observational | N/A | Italy | 75 | 35 (47%) | 6.5 (3-12)** | 52 (47-62) |
| Queiro et al. (2017)[25] | 2014 to 2015 | Cross-sectional observational study | N/A | Spain | 277 | MDA = 82 (62%) | MDA = 9.8 (8.1) | MDA = 53.5 (13.3) |
| | | | | | | Non-MDA = 41 (44%) | Non-MDA = 9.4 (7.3) | Non-MDA = 52.8 (10.9) |

Measurement properties of MDA criteria

| Author (Year) | Study Years | Study Type | Experimental Treatment | Country | Sample Size | Gender (n, % male) | Mean Duration of PsA, Years (SD) | Mean Age, Years (SD) |
|---|---|---|---|---|---|---|---|---|
| Rahman et al. (2017)[33] | 2005 to 2010 | Prospective long-term observational study | bDMARDs | Canada | 223 | 101 (45%) | 5.4 (6.3) | 49.8 (11.1) |
| Van den Bosch et al. (2015)[47] | — | Post-hoc analysis of prospective longitudinal clinical efficacy (open-label) | Adalimumab | Unknown | Joint and skin remission¶ = 43 | Joint and skin remission = 26 (61%) | Joint and skin remission = 10.2 (7.7) | Joint and skin remission = 45.6 (10.8) |
| | | | | | Joint remission only = 30 | Joint remission only = 22 (73%) | Joint remission only = 7.3 (7.0) | Joint remission only = 39.4 (10.2) |
| | | | | | Skin remission only = 101 | Skin remission only = 53 (53%) | Skin remission only = 11.2 (7.8) | Skin remission only = 48.2 (11.3) |
| | | | | | Neither skin nor joint remission = 94 | Neither skin nor joint remission: 59 (63%) | Neither skin nor joint remission = 11.8 (8.8) | Neither skin nor joint remission = 46.5 (10.7) |

Abbreviations: bMARD = biological disease-modifying antirheumatic drug; CRP = C-reactive protein; csDMARD = conventional synthetic disease-modifying antirheumatic drug; MDA = minimal disease activity; N/A = not applicable; NR = not reported; non-MDA = not achieving MDA; PGA = physician global assessment; PtGA = patient global assessment of disease activity; RCT = randomized controlled trial; SD = standard deviation; SJC = swollen joint count; TJC = tender joint count

* Median

** Median (25th to 75th percentile)

¶Skin remission in this study was defined as clear or almost clear PGA; Joint remission was defined as SJC ≤1 and TJC ≤1 with assessments of the proportions of patients in 28-joint Disease Activity Score (DAS28) ≤2.6, MDA, or Boolean remission (TJC ≤1, SJC ≤1, CRP ≤1, PtGA ≤1).