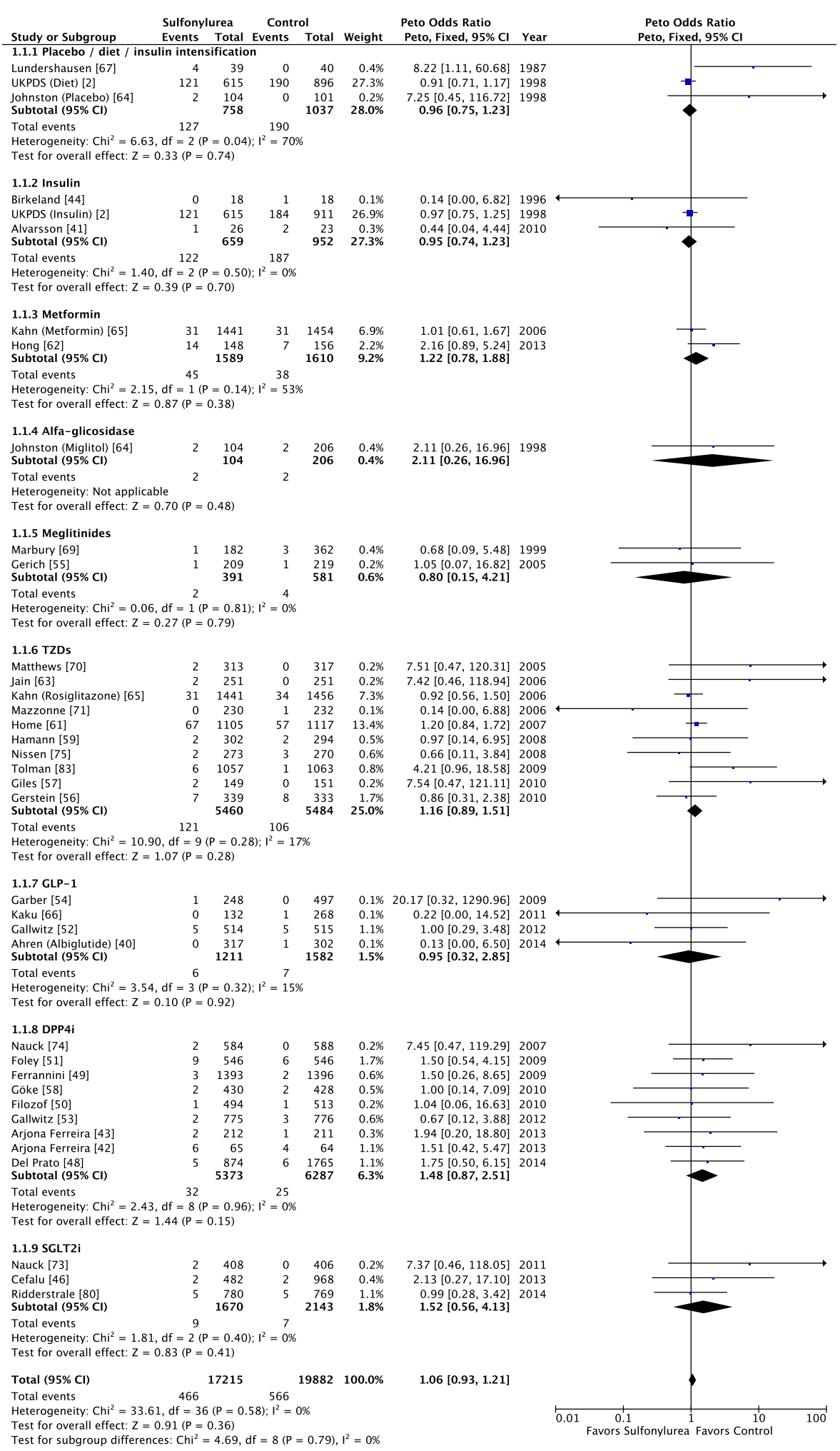
Sulfonylurea
Control
Peto Odds Ratio
Peto Odds Ratio
Study or Subgroup
Events
Total
Events
Total
Weight
Peto, Fixed, 95% CI
Year
Peto, Fixed, 95% CI
1.1.1 Placebo / diet / insulin intensification
Lundershausen [67] 4 39 0 40 0.4% 8.22 [1.11, 60.68] 1987
UKPDS (Diet) [2] 121 615 190 896 27.3% 0.91 [0.71, 1.17] 1998
Johnston (Placebo) [64] 2 104 0 101 0.2% 7.25 [0.45, 116.72] 1998
Subtotal (95% CI) 758 1037 28.0% 0.96 [0.75, 1.23]
Total events 127 190
Heterogeneity: Chi² = 6.63, df = 2 (P = 0.04); I² = 70%
Test for overall effect: Z = 0.33 (P = 0.74)
1.1.2 Insulin
Birkeland [44] 0 18 1 18 0.1% 0.14 [0.00, 6.82] 1996
UKPDS (Insulin) [2] 121 615 184 911 26.9% 0.97 [0.75, 1.25] 1998
Alvarsson [41] 1 26 2 23 0.3% 0.44 [0.04, 4.44] 2010
Subtotal (95% CI) 659 952 27.3% 0.95 [0.74, 1.23]
Total events 122 187
Heterogeneity: Chi² = 1.40, df = 2 (P = 0.50); I² = 0%
Test for overall effect: Z = 0.39 (P = 0.70)
1.1.3 Metformin
Kahn (Metformin) [65] 31 1441 31 1454 6.9% 1.01 [0.61, 1.67] 2006
Hong [62] 14 148 7 156 2.2% 2.16 [0.89, 5.24] 2013
Subtotal (95% CI) 1589 1610 9.2% 1.22 [0.78, 1.88]
Total events 45 38
Heterogeneity: Chi² = 2.15, df = 1 (P = 0.14); I² = 53%
Test for overall effect: Z = 0.87 (P = 0.38)
1.1.4 Alfa-glicosidase
Johnston (Miglitol) [64] 2 104 2 206 0.4% 2.11 [0.26, 16.96] 1998
Subtotal (95% CI) 104 206 0.4% 2.11 [0.26, 16.96]
Total events 2 2
Heterogeneity: Not applicable
Test for overall effect: Z = 0.70 (P = 0.48)
1.1.5 Meglitinides
Marbury [69] 1 182 3 362 0.4% 0.68 [0.09, 5.48] 1999
Gerich [55] 1 209 1 219 0.2% 1.05 [0.07, 16.82] 2005
Subtotal (95% CI) 391 581 0.6% 0.80 [0.15, 4.21]
Total events 2 4
Heterogeneity: Chi² = 0.06, df = 1 (P = 0.81); I² = 0%
Test for overall effect: Z = 0.27 (P = 0.79)
1.1.6 TZDs
Matthews [70] 2 313 0 317 0.2% 7.51 [0.47, 120.31] 2005
Jain [63] 2 251 0 251 0.2% 7.42 [0.46, 118.94] 2006
Kahn (Rosiglitazone) [65] 31 1441 34 1456 7.3% 0.92 [0.56, 1.50] 2006
Mazzonne [71] 0 230 1 232 0.1% 0.14 [0.00, 6.88] 2006
Home [61] 67 1105 57 1117 13.4% 1.20 [0.84, 1.72] 2007
Hamann [59] 2 302 2 294 0.5% 0.97 [0.14, 6.95] 2008
Nissen [75] 2 273 3 270 0.6% 0.66 [0.11, 3.84] 2008
Tolman [83] 6 1057 1 1063 0.8% 4.21 [0.96, 18.58] 2009
Giles [57] 2 149 0 151 0.2% 7.54 [0.47, 121.11] 2010
Gerstein [56] 7 339 8 333 1.7% 0.86 [0.31, 2.38] 2010
Subtotal (95% CI) 5460 5484 25.0% 1.16 [0.89, 1.51]
Total events 121 106
Heterogeneity: Chi² = 10.90, df = 9 (P = 0.28); I² = 17%
Test for overall effect: Z = 1.07 (P = 0.28)
1.1.7 GLP-1
Garber [54] 1 248 0 497 0.1% 20.17 [0.32, 1290.96] 2009
Kaku [66] 0 132 1 268 0.1% 0.22 [0.00, 14.52] 2011
Gallwitz [52] 5 514 5 515 1.1% 1.00 [0.29, 3.48] 2012
Ahren (Albiglutide) [40] 0 317 1 302 0.1% 0.13 [0.00, 6.50] 2014
Subtotal (95% CI) 1211 1582 1.5% 0.95 [0.32, 2.85]
Total events 6 7
Heterogeneity: Chi² = 3.54, df = 3 (P = 0.32); I² = 15%
Test for overall effect: Z = 0.10 (P = 0.92)
1.1.8 DPP4i
Nauck [74] 2 584 0 588 0.2% 7.45 [0.47, 119.29] 2007
Foley [51] 9 546 6 546 1.7% 1.50 [0.54, 4.15] 2009
Ferrannini [49] 3 1393 2 1396 0.6% 1.50 [0.26, 8.65] 2009
Göke [58] 2 430 2 428 0.5% 1.00 [0.14, 7.09] 2010
Filozof [50] 1 494 1 513 0.2% 1.04 [0.06, 16.63] 2010
Gallwitz [53] 2 775 3 776 0.6% 0.67 [0.12, 3.88] 2012
Arjona Ferreira [43] 2 212 1 211 0.3% 1.94 [0.20, 18.80] 2013
Arjona Ferreira [42] 6 65 4 64 1.1% 1.51 [0.42, 5.47] 2013
Del Prato [48] 5 874 6 1765 1.1% 1.75 [0.50, 6.15] 2014
Subtotal (95% CI) 5373 6287 6.3% 1.48 [0.87, 2.51]
Total events 32 25
Heterogeneity: Chi² = 2.43, df = 8 (P = 0.96); I² = 0%
Test for overall effect: Z = 1.44 (P = 0.15)
1.1.9 SGLT2i
Nauck [73] 2 408 0 406 0.2% 7.37 [0.46, 118.05] 2011
Cefalu [46] 2 482 2 968 0.4% 2.13 [0.27, 17.10] 2013
Ridderstrale [80] 5 780 5 769 1.1% 0.99 [0.28, 3.42] 2014
Subtotal (95% CI) 1670 2143 1.8% 1.52 [0.56, 4.13]
Total events 9 7
Heterogeneity: Chi² = 1.81, df = 2 (P = 0.40); I² = 0%
Test for overall effect: Z = 0.83 (P = 0.41)
Total (95% CI) 17215 19882 100.0% 1.06 [0.93, 1.21]
Total events 466 566
Heterogeneity: Chi² = 33.61, df = 36 (P = 0.58); I² = 0%
Test for overall effect: Z = 0.91 (P = 0.36)
Test for subgroup differences: Chi² = 4.69, df = 8 (P = 0.79), I² = 0%
0.01
0.1
1
10
100
Favors Sulfonylurea
Favors Control