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Table 1. Main Characteristics of the RCTs included in meta-analyses

First author, Year, Country	Trial name, Population(%M), Age at baseline	Primary endpoint of trial, Follow-up period	Contrast for RR	Cancer incidence: RR (95% CI), (n case/n total)	Cancer mortality: RR (95% CI), (n case/n total), Total mortality: RR (95% CI), (n case/n total)	25(OH)D level (nmol/L): baseline--> follow-up	Inclusion/ exclusion criteria regarding Vit D supplement/ Treatment
Trivedi 2003 UK	NA general population(76%) 75 y	Fracture, Total mortality 5 y	Vit D3 vs. placebo Vit D3: 100,000 IU/4m (~833 IU/d)	1.09 (0.86, 1.36) (188/1,345) vs. (173/1,341)	0.86 (0.61, 1.20) (63/1345) vs. (72/1341) *total death 0.88 (0.74, 1.06) (224/1345) vs. (247/1341)	Intervention: NA --> 74 at 4y Control: NA --> 53 at 4y	excluded current users of Vit D supplement
Wactawski-Wende 2006 USA LaCroix 2009 USA	Calcium plus vitamin D trial (from WHI) postmenopausal women (0%) 62 y	Hip fracture 7 y (up to 9.7 y)	Vit D3+Ca vs. placebo Vit D3: 400 IU/d Ca(carbonate): 1,000 mg/d	0.98 (0.91, 1.05) (1,634/18,176) vs. (1,655/18,106)	0.89 (0.77, 1.03) (344/18176) vs. (382/18106) *total death 0.91 (0.83, 1.01) (744/18176) vs. (807/18106)	Intervention: 42 --> 54 at 2y Control: 42 --> NA	Excluded current users of Vit D supplement (≥ 600 IU/d); calcitriol
Lappe 2007 USA	NA postmenopausal women (0%) 67 y	Fracture 4 y	Vit D3+Ca vs. Ca Vit D3: 1,100 IU/d Ca: (carbonate) 1,500mg/d or (citrate)	0.76 (0.38, 1.55) (13/446) vs. (17/445) After 1y exclusion: 0.55 (0.24, 1.28)[a]	NA	Intervention: 72 --> 96 at 1y Control: 72 --> 71 at 1y	not specified

			1,400mg/d				
Sanders 2010 Australia	Vital D study postmenopausal women (0%), 76 y	Fracture 3-5 y with 1y post-intervention follow-up	Vit D3 vs. placebo Vit D3: 500,000 IU/y (~1,370 IU/d)	0.70 (0.27, 1.82) (7/1131) vs. (10/1125)	NA *total death 0.85 (0.56, 1.28) (40/1131) vs. (47/1125)	Intervention: 53 --> 58 at trial end Control: 45 --> 38 at trial end	Excluded current users of Vit D supplement (≥ 400 IU/d); calcitriol
Avenell 2012 UK	RECORD general population (15%) 77 y	Fracture 2-5.2 y with 3y post-intervention follow-up	Vit D3 (w, w/o Ca) vs. no Vit D3 (w, w/o Ca) Vit D3: 800 IU/d Ca(carbonate): 1000 mg/d	1.07 (0.92, 1.25) (338/2,649) vs. (315/2,643)	0.85 (0.68, 1.06) (151/2649) vs. (178/2643) *total death 0.93 (0.85, 1.02) (836/2649) vs. (881/2643)	Intervention: 38 --> 62 at 1y Control: 38 --> 44 at 1y	Excluded current users of Vit D supplement (200 IU/d); those with past treatment with Vit D metabolite or Vit D injection
Baron 2015 USA	NA individuals with history of colorectal adenomas (63%) 58 y	Colorectal adenomas 3.7 y (range: 3-5 y)	Vit D3 (w, w/o Ca) vs. no Vit D3 (w, w/o Ca) Vit D3: 1,000 IU/d Ca(carbonate): 1,200 mg/d	0.77(0.53, 1.12) (47/1130) vs. (61/1129)	NA *total death 1.25 (0.59, 2.66) (15/1130) vs. (12/1129)	Intervention: 61 --> 81 at trial end Control: 61 --> NA	Limited non-protocol supplement of Vit D up to 1,000 IU/d
Jorde 2016 Norway	Tromso Vitamin D and T2DM trial individuals with impaired fasting glucose and/or impaired glucose tolerance 62 y	Type 2 diabetes 5 y	Vit D3 vs. placebo Vit D3: 20,000 IU/wk (~2,857 IU/d)	1.50 (0.69, 3.26) (15/256) vs. (10/255)	NA	Intervention: 60 --> 122 at trial end Control: 61 --> 67 at trial end	Limited non-protocol supplement of Vit D (including cod liver oil) up to 400 IU/d

Lappe 2017 USA	NA postmenopausal women (0%) 65 y	Total cancer excluding non-melanoma skin cancers 4 y	Vit D3+Ca vs. placebo Vit D3: 2000 IU/d Ca(carbonate): 1,500 mg/d	0.70 (0.47-1.02) (45/1102) vs. (64/1095) After 1y exclusion: 0.65 (0.42, 0.99)[a]	NA *total death 0.77 (0.29, 2.07) (7/1102) vs. (9/1095)	Intervention: 83 --> 106 at trial end Control: 82 --> 77 at trial end	Limited non-protocol supplement of Vit D up to 800 IU/d
Manson 2018 USA	VITAL general population including African Americans by 20% (49%) 67 y	Total invasive cancer; Major cardiovascular events 5.3 y (range: 3.8-6.1 y)	Vit D3 (w, w/o omega-3 fatty acids) vs. no Vit D3 (w, w/o omega-3 fatty acids) Vit D3: 2000 IU/d Omega-3 fatty acids: 1g/d	0.96 (0.88-1.06) (793/12,927) vs. (824/12,944) After 2y exclusion 0.94 (0.83, 1.06)[b]	0.83 (0.67-1.02) (154/12,927) vs. (187/12,944) After 1y exclusion 0.79 (0.63, 0.99)[a] After 2y exclusion 0.75 (0.59, 0.96)[b] *total death 0.99 (0.87, 1.12) (485/12,927) vs. (493/12,944)	Intervention: 75 --> 105 at 1y Control: 75--> 73 at 1y	Limited non-protocol supplement of Vit D up to 800 IU/d
Scragg 2018 New Zealand	ViDA study Participants from family practices and community groups (58%) 66 y	CVD 3.3 y (range: 2.5-4.2 y)	Vit D3 vs. placebo Vit D3: Initial bolus of 200,000 IU followed by 100,000 IU/m (~3,279 IU/d)	1.01 (0.81-1.25) (165/2558) vs. (163/2550) After 1y exclusion: 0.95 (0.74, 1.23)	0.99 (0.60, 1.64) (30/2,558) vs. (30/2,550) *total death 0.94 (0.69, 1.27) (75/2,558) vs. (80/2,550)	Intervention: 64 --> 120-135 at 0.5-3y Control: 63 --> 70-85 at 0.5-3y	Excluded current users of Vit D supplement including cod liver oil (>600 IU/d if aged 50-70 y; >800 IU/d if aged 71-84 y)

Abbreviations: Ca, calcium; d, day; M, male; m, month; n, number; NA, not available; Vit, vitamin; w, with; wk, week; w/o, without; y, year

[a] excluded events occurring within the first year of randomization

[b] excluded events occurring within the first two years of randomization