### Bodenner 2007

**USA Nursing Homes**  
**Nested case control** (Retrospective cohort)  
01/2001 to 12/2003

**Purpose:** to examine the effects of megestrol acetate (MA) on the weight and overall mortality in elderly nursing home residents.

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| N = 17328  
USA Nursing Homes  
Nested case control (Retrospective cohort)  
01/2001 to 12/2003 | n = 709 megestrol acetate  
Men and women (70.9%)  
Mean age 84.1 (9.7)  
Medications = 10.0 (4.2), p <0.001  
Index weight = 122.6 (28.9)  
ADL score = 2.9 (1.0)  
Cognitive functioning score = 3 (1.6)  
Unstable condition = 54.9%  
Acute episode of recurrent problem 23.4%  
Cancer dx = 9.3%  
Index date = 1st report of weight loss per criteria | Mortality  
Significant associations with increased mortality  
MA exposure  
Older age  
Significant associations with decreased mortality  
Female sex  
MA dose / mortality/weight gain  
200 to 400 mg/d vs <200 mg/d  
>400 mg/d vs <200 mg/d  
MA >400 mg day for 6 months  
Weight increase/decrease (index mean = 122.6 (28.9)  
3 months  
6 months  
Survival group for 6 months  
279 (39.4%) died  
Mean survival = 23.9 (20.3 to 27.5) mo  
23% decrease in mean survival (p <0.001)  
1.37 (1.17 to 1.59)  
1.44 (1.16 to 1.75)  
0.65 (0.54 to 0.77)  
No significant difference for any comparisons for mortality/survival  
No difference in weight gain vs controls  
No significant difference between MA and control group  
Decreased to 119 (102 to 137)  
Increased to 120 (104 to 139)  
No change from index at 6 months  
Conclusion: MA treatment was associated with a significant increase in mortality without a significant increase in weight  
Although MA appears to increase appetite and feeling of well being in most patients, the amount of actual weight gained is modest and highly variable among patients  
There was no dose-response effect on mortality or survival suggesting that the negative effects of MA are appreciated at doses lower than those associated with change in appetite and weight. |
| n = 1418 matched controls | n = 1418 matched controls  
Men and women (70.9%)  
Mean age 84.2 (9.0)  
Medications = 9.4 (4.0), p <0.001  
Index weight = 123.9 (27.8)  
ADL score = 2.9 (1.0)  
Cognitive functioning score = 3 (1.7)  
Unstable condition = 53.4%  
Acute episode of recurrent problem 24.7%  
Cancer dx = 8.7%  
Matched with MA group (1:2) for age (±10 years), sex, race, index date (±90 days) and index weight (±20 pounds) | Mortality  
Weight increase/decrease (index mean = 123.9 (27.8)  
3 months  
6 months  
Survival group for 6 months  
459 (32.4%) died  
Mean survival = 31.2 (27.8 to 35.9) mo  
Index weight maintained = 122 (106 to 139)  
Increased to 124 (106 to 141)  
Conclusion: MA treatment of elderly nursing home residents with significant weight loss was associated with a significant increase in all-cause mortality without a significant increase in weight in this large, retrospective study. |