The outcome variable bone mineral content (BMC) may generally reflect peak bone mass better than does BMD. However, our main results regarding the changes in the BMD of the lumbar spine in the girls who were in the same phase of growth (decelerating with age) and sexual maturation but who had different vitamin D status were convincing. The changes in BMD in growing girls were controlled accurately by the use of several covariates (ie, baseline reproductive years, baseline bone mineral values, increases in height and weight, mean intake of calcium, and mean amount of physical activity during the study) to adjust the changes in bone size. However, it is true that the use of a method with BMC as a dependent variable and with adjustment for bone area (BA) is an interesting way of avoiding pitfalls in the assessment of real changes in bone density in the growing bone (2). Thus, we reanalyzed our main results with the use of this recommended principle.

In our 3-y prospective study of 171 peripubertal girls, the correlation between the 3-y changes (Δ) in BMD and BMC was highly significant (r = 0.969), and the degree of relation between baseline 25-hydroxyvitamin D [25(OH)D] and ΔBMC (r = 0.35, P < 0.001) was quite similar to that between baseline 25(OH)D and ΔBMD (r = 0.33, P < 0.001). The mean (±SD) crude values of 3-y BMC in the lumbar spine were significantly different in the vitamin D tertiles (11.0 ± 8.0, 10.9 ± 9.6, and 16.1 ± 7.9 g, respectively; P = 0.006), whereas the BA did not differ significantly between the vitamin D tertiles. In the girls with advanced sexual maturation at baseline (n = 129), the difference in 3-y BMC accumulation from baseline (adjusted for baseline reproductive years, baseline bone mineral values, BA, increases in height and weight, mean intake of calcium, and mean amount of physical activity) between the girls with severe hypovitaminosis D [25(OH)D concentration < 20 nmol/L] and those with normal vitamin D status [25(OH)D concentration ≥37.5 nmol/L] was 6.4% (P = 0.007) in the lumbar spine. In addition, when this method was used (Table 1), ΔBMC was 1.839 g greater (95% CI: 0.436 g, 3.242 g) in the highest vitamin D tertile than in the lowest tertile. These values obtained after various other adjustments are also given in Table 1. These values for the femoral neck did not differ significantly, except when ΔBMC values were adjusted only for increases in BA, height, and

### Table 1

Three-year changes (Δ) in the bone mineral density (BMD) and the bone mineral content (BMC) of the lumbar spine (L1–L4) and at the femoral neck (FN) analyzed after various adjustments in peripubertal girls with advanced sexual maturation (n = 129) according to tertiles of baseline serum 25-hydroxyvitamin D [25(OH)D] concentration

<table>
<thead>
<tr>
<th>Serum 25(OH)D tertiles</th>
<th>Lowest (19.2 ± 5.1 nmol/L)</th>
<th>Middle (30.2 ± 2.5 nmol/L)</th>
<th>Highest (45.1 ± 8.2 nmol/L)</th>
<th>Difference between highest and lowest tertiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>ΔBMD, L1–L4 (g/cm²)</td>
<td>0.111 ± 0.007</td>
<td>0.118 ± 0.008</td>
<td>0.140 ± 0.007</td>
<td>0.029 (0.003, 0.054)</td>
</tr>
<tr>
<td>ΔBMC, L1–L4 (g)</td>
<td>12.067 ± 0.401</td>
<td>12.401 ± 0.436</td>
<td>13.906 ± 0.399</td>
<td>1.839 (0.436, 3.242)</td>
</tr>
<tr>
<td>ΔBMC, L1–L4 (g)</td>
<td>12.132 ± 0.403</td>
<td>12.322 ± 0.437</td>
<td>13.906 ± 0.402</td>
<td>1.774 (0.363, 3.185)</td>
</tr>
<tr>
<td>ΔBMC, L1–L4 (g)</td>
<td>11.993 ± 0.403</td>
<td>12.378 ± 0.446</td>
<td>14.000 ± 0.408</td>
<td>2.007 (0.608, 3.406)</td>
</tr>
<tr>
<td>ΔBMC, FN (g)</td>
<td>0.524 ± 0.045</td>
<td>0.581 ± 0.050</td>
<td>0.686 ± 0.046</td>
<td>0.162 (0.0029, 0.322)</td>
</tr>
</tbody>
</table>

1 ± SE
2 Adjusted for baseline reproductive year, baseline value of BMD, increases in height and weight, mean intake of calcium, and mean amount of physical activity.
3 ± SE relative to baseline.
4; 95% CI in parentheses.
5 Adjusted for baseline reproductive year; baseline value of BMC; increases in bone area, height, and weight; mean intake of calcium; and mean amount of physical activity.
6 Adjusted for increases in bone area, height, and weight; mean intake of calcium; and mean amount of physical activity.
7 Adjusted for increases in bone area, height, and weight.
and weight. In addition, the 3-y adjusted ΔBMC values for lumbar spine or femoral neck among the less mature girls did not differ significantly by 25(OH)D tertile. These results concerning ΔBMC are quite comparable to the original results obtained with the use of ΔBMD as the outcome variable. Perhaps after this analysis, the title of our original paper may be accepted as reflecting the substance of the study reported.

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