Corrections to Cabrera et al.

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Corrections of typos (?) in the proof of Theorem 1 by Cabrera et al. (1994):

- Equation (2.2) has to be

$$\begin{aligned}\mathrm{E}(M_n - M)^2 =& \frac{1}{f^2(M)}\,\mathrm{E}(V_n - \tfrac{1}{2})^2 - \frac{f'(M)}{f^4(M)}\,\mathrm{E}(V_n - \tfrac{1}{2})^3 \\ &+ \frac{1}{f^6(M)}\left[\frac{(f'(M))^2}{4} + \frac{(3f'^2 - f''f)(M)}{3}\right]\mathrm{E}(V_n - \tfrac{1}{2})^4 + \frac{c}{n^3} + \mathrm{o}(n^{-3})\end{aligned}$$

- Equation (2.5) has to be

$$\mathrm{E}(V_n - \tfrac{1}{2})^4 = \begin{cases} \dfrac{3}{16(2m+5)(2m+3)} & \text{for } n = 2m+1 \\ \dfrac{3m}{8(2m+4)(2m+3)(2m+1)} & \text{for } n = 2m \end{cases}$$

- Equation (2.6) has to be

$$\mathrm{E}(V_n - \tfrac{1}{2})^4 \doteq \begin{cases} \dfrac{3}{64m^2} - \dfrac{3}{16m^3} & \text{for } n = 2m+1 \\ \dfrac{3}{64m^2} - \dfrac{3}{16m^3} & \text{for } n = 2m \end{cases}$$

References

Cabrera J., Maguluri G. and Singh K. (1994): An odd property of the sample median. *Stat. Probab. Lett.*, **19**(4): 349–354. (document)