

LCT ②

$$= \int \det M(x) dN(x, 0, \Sigma(s_n) \Sigma(s_n))$$

$$\text{where } \Sigma(s_n) = \Sigma(s_n) - \Delta(s_n) \bar{\Gamma}' \Delta(s_n)$$

$$\text{let } x = \Sigma_{s_n}^{1/2} z$$

$$= \int \det M[\Sigma_{s_n}^{1/2} z]$$

$$\int \det M[\Sigma_{s_n}^{1/2} z] d(z, 0, I) dz$$

Note that Jacobian =  $\det \Sigma_{s_n}^{1/2}$  - which

$$\boxed{\det \Sigma_n}$$

So result follows by ~~Lety~~ <sup>by</sup> ~~Dominated~~ DCT.

due to the centrality of  $P_{s_n}$ , ~~or~~  $P_{s_n}(s_n)$