



**Fig. S4. Clinical presentation at the age of 41 years.** (a) Progressive loss of scalp hair. (b) erythematous, erosive plaque on the left thumb. (c) Histopathological analysis demonstrated a well-differentiated, verrucous squamous cell carcinoma. The maximal depth of penetration is 2.6 mm (haematoxylin-eosin staining, original magnification  $\times 100$ ). (d) Negative p16<sup>INK4a</sup>-staining (p16<sup>INK4a</sup>, original magnification  $\times 100$ ). (e) Presentation of a plantar wart (*black arrow*) located at the left foot and (h) flat verrucae vulgares on the dorsal right hands (*black arrow*). (f, i) Histopathological analysis shows typical features of common warts with hyperpapillomatosis, acanthosis, and parakeratosis (haematoxylin-eosin staining, original magnification  $\times 100$ ) and negative (g, j) p16<sup>INK4a</sup>-staining (original magnification  $\times 100$ ).