

Supplemental information

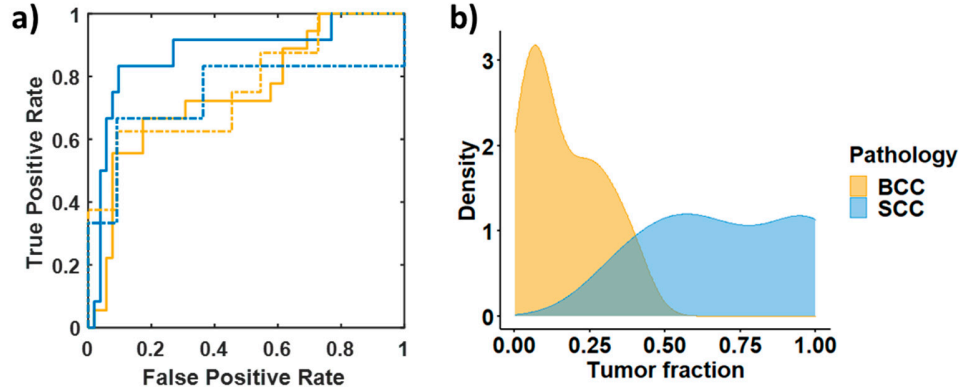


Figure S1. Additional analysis to distinguish tumor (BCC or SCC) and normal group. a) ROC curves from classification models applying three optimum biomarkers (collagen, elastin, and ceramide for BCC vs. normal, and collagen, nucleus, keratin for SCC vs. normal); yellow and blue color represent BCC vs. normal skin and SCC vs. normal classification, respectively, solid and dash line shows leave-one-measurement-out and leave-one-patient out cross-validation analysis respectively. Briefly, we built a logistic regression classifier to classify BCC or SCC samples versus healthy skin samples based on their seven bio-components contributions. We applied the leave-one-out cross-validation method to create a Receiver Operating Characteristic (ROC) curve. This method involves using a subset of the data (all minus one) as inputs for logistic regression and calculates the posterior probability of the one leave-out datum. We repeated this calculation to obtain the posterior probabilities of all the measurements. The ROC curve was then constructed based on these posterior probabilities. The areas under the ROC curve of BCC/SCC versus normal skin are 0.75 and 0.87, respectively, for per measurement analysis b) population distributions of BCC and SCC tumors within the sampling area with a mean fraction of 0.2 and 0.7, respectively.