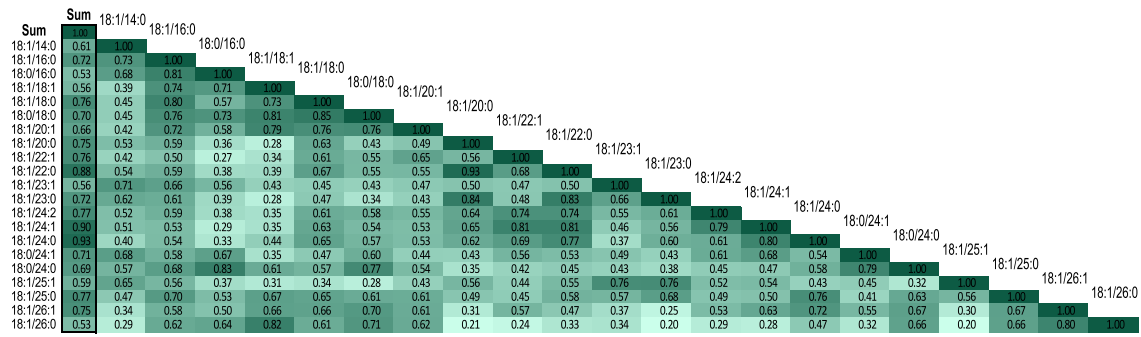
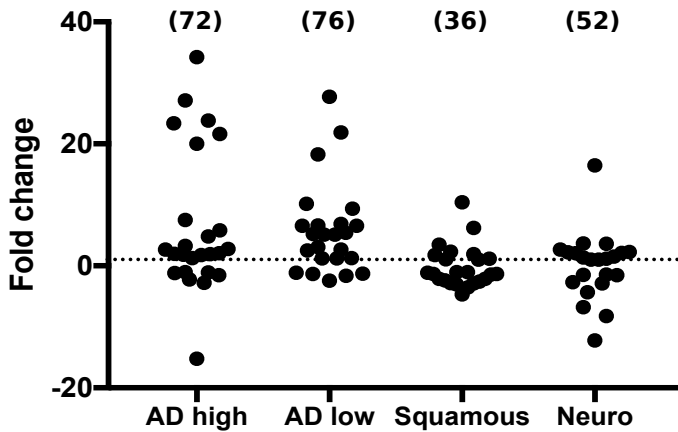


Supplementary Figure 1: Lower levels of S1P in tumor tissue is maintained despite normalization by tissue weight. DNA and sphingosine-1-phosphate (S1P) were quantified in homogenated lung parenchyma of ex-smoker patients with benign lung diseases (white); in tumor-free (grey) and tumor (black) lung tissues from patients with high-grade adenocarcinomas (AD high), low-grade adenocarcinomas (AD low), squamous and neuroendocrine (Neuro) lung carcinomas. A) μg of DNA per mg of homogenized tissue. B) S1P levels normalized to tissue mass. Bars represent the average \pm SEM, n=22-25. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ compared to tumor-free tissue.



Supplementary Figure 2: Individual ceramide chain length correlate with each other and with the total ceramide level.

Shown are correlations R values between individual chain length of ceramides (Cer) measured and between the sum of ceramides and the individual chain lengths. Color intensity indicates correlation strength.



Supplementary Figure 3: 2-hydroxyhexosylceramide levels are higher in tumor samples than in tumor-free tissue for the vast majority of adenocarcinoma patients. The sum of 2-hydroxyhexosylceramides in tumor tissue was divided by the sum of 2-hydroxyhexosylceramides in the tumor-free tissue of each individual patient with low- and high-grade adenocarcinoma (AD), squamous and neuroendocrine (Neuro) carcinomas. The dotted line indicates equal levels of 2-hydroxyhexosylceramides in tumor and tumor-free tissue (ratio of 1) and the number in parentheses represents the percent of patients with fold change higher than 1.