

Figure S1.

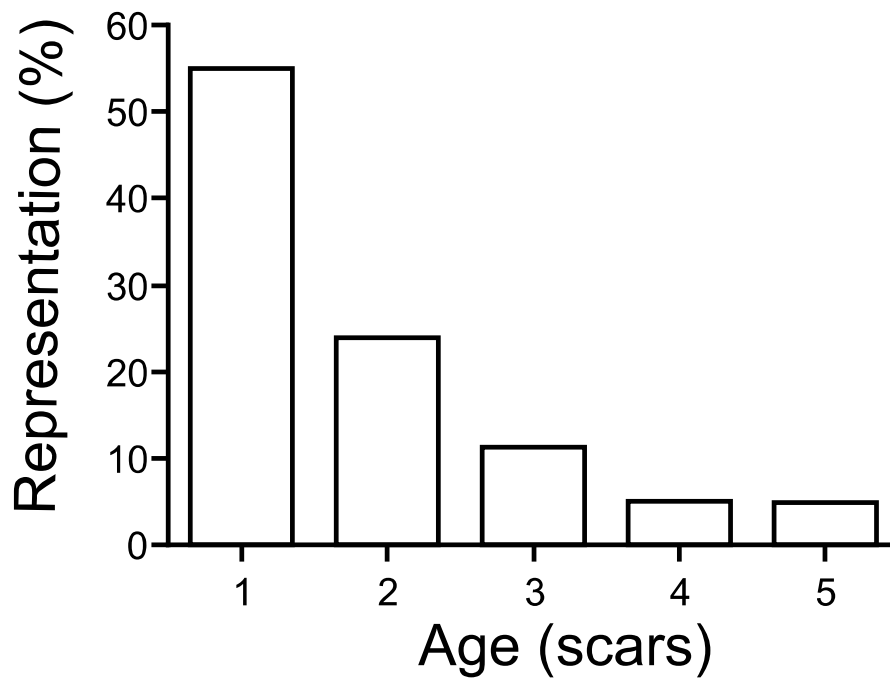


Figure S2.

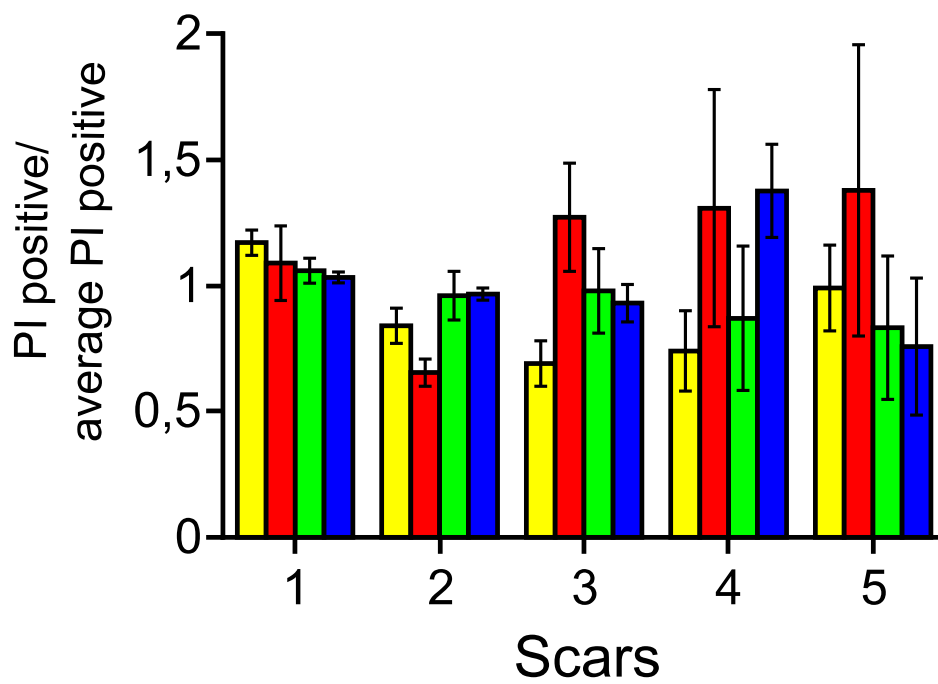


Figure S3.

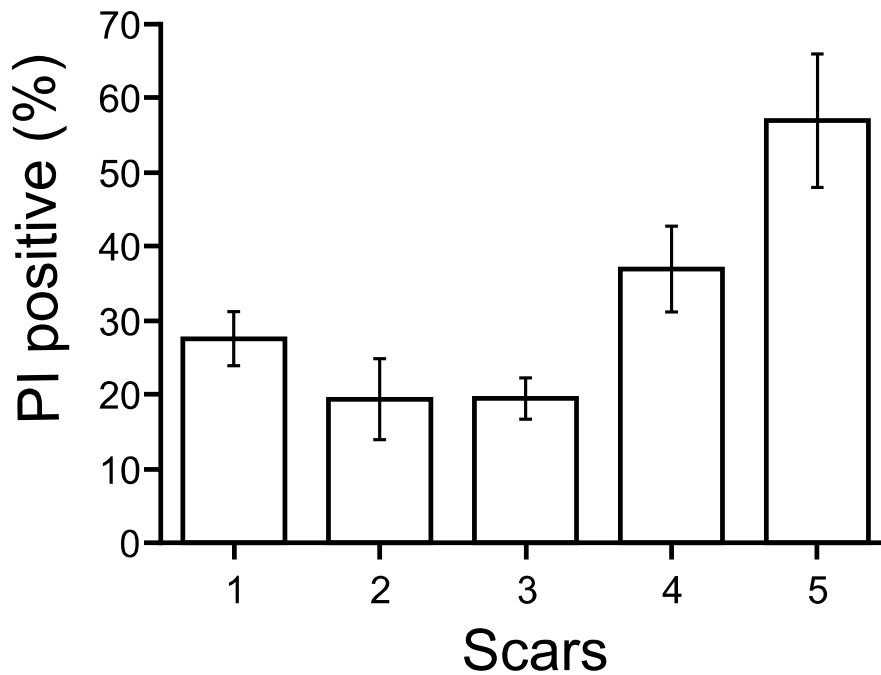


Figure S4.

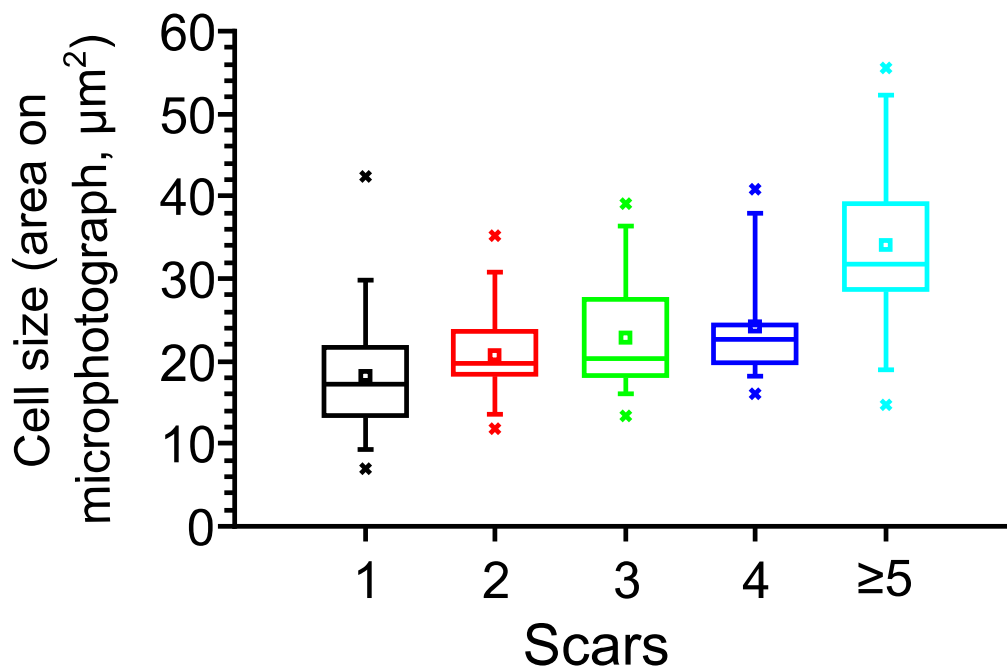


Figure legends.

Figure S1. Representation of different age classes of W303 strain in exponentially growing culture. More than 1900 cells were analyzed.

Figure S2. Stress-resistance of *S. cerevisiae* cells subjected to acetic acid (yellow bars) ethanol (blue bars), butanol (red bars) or menadione (green bars) does not depend on replicative age. The values higher than one show that the percentage of dead cell in this aging class is higher than average, the values below one represent the relatively resistant aging classes. $p > 0.1$ for all

treatments when considering mother cells only (with exception of virgin daughter cells with age = 1) Kruskal-Wallis test.

Figure S3. *S. cerevisiae* diploid cells show similar stress resistance profile as haploid cells when subjected to heat shock. P-value < 0.05, Kruskal-Wallis test.

Figure S4. Cell size positively correlates with replicative age. More than 200 cells were analyzed. Kendall's tau = 0.33, Spearman's rho = 0.42, p-value < 0.0001 both. Minimal and maximum values – diagonal cross; mean – rectangle; box – 25-75 percentile; whiskers – 5-95 percentile.