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# Responding to loss

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The response of cells to telomere loss is thought to resemble the DNA damage response. In the Early Edition of the Proceedings of the National Academy of Sciences, Nautiyal *et al.* describe genome-wide gene expression changes upon deletion of *TLC1*, the telomerase RNA component in *Saccharomyces cerevisiae* (*Proc Natl Acad Sci USA* 2002, 10.1073/pnas.142162499). The coin the term 'telomerase deletion response' (TDR) to refer to the transcriptional program induced by telomere shortening. The TDR overlaps with the DNA damage response and the environmental stress response. Nautiyal *et al.* define a set of genes, the 'telomerase deletion signature', that are distinct from other stress responses.

# References

1. p53- and ATM-dependent apoptosis induced by telomeres lacking TRF2

2. *Proceedings of the National Academy of Science*s , [http://www.pnas.org]