Medical Xpress

Study reveals new connection between impaired autophagy and heart failure

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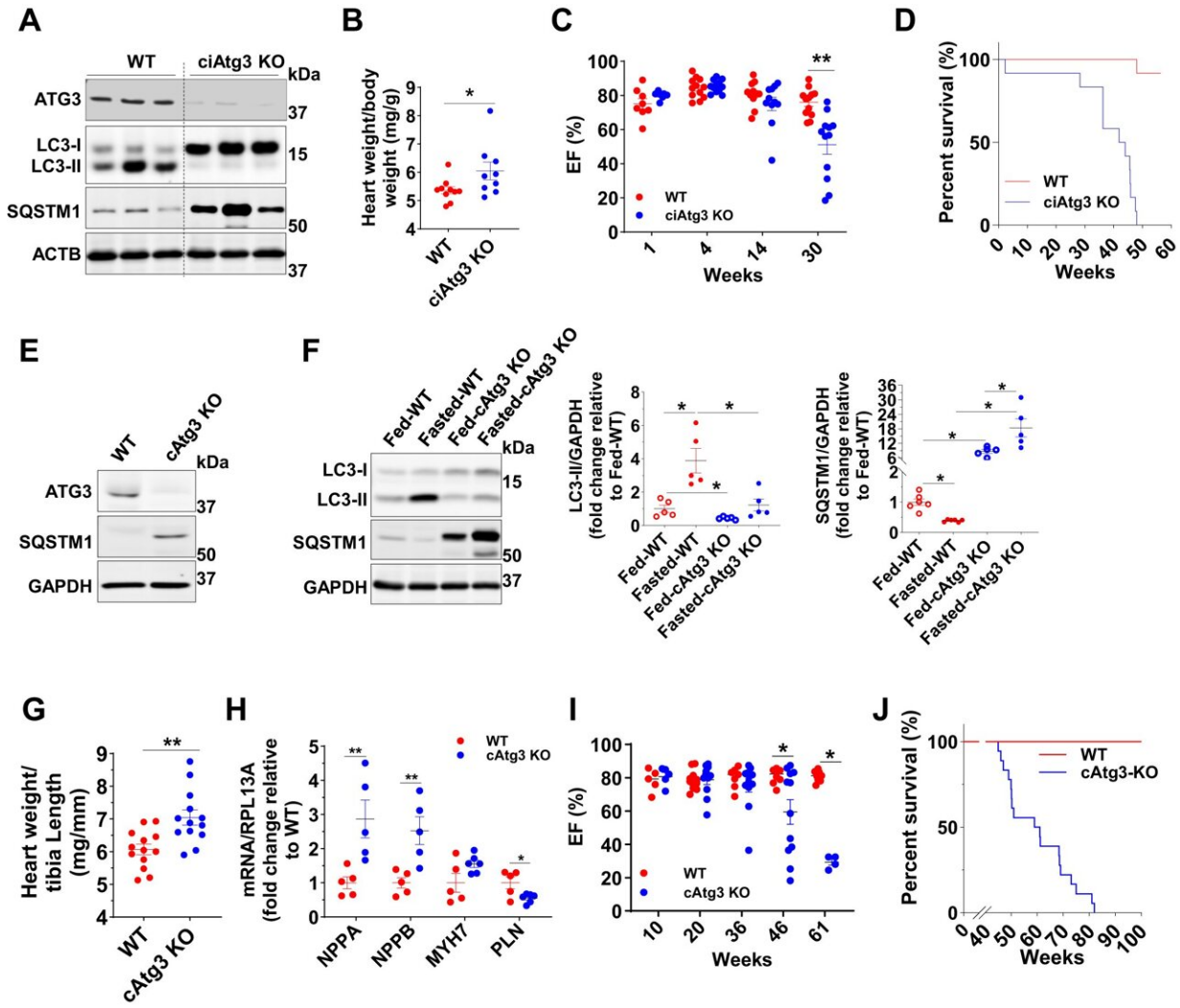

Cardiac-specific *ATG3* deletion blocks autophagy and precipitates cardiac contractile dysfunction(**A**) ATG3, LC3 (MAP1LC3A), SQSTM1, and beta-actin (ACTB) protein levels in WT and ciAtg3 KO mouse hearts 1 week after last

tamoxifen injection. Mice, at 6 weeks of age, were intraperitoneally injected with tamoxifen at a dose of 100 μg/g body weight/day for 5 consecutive days. One week after last tamoxifen injection, mice were euthanized and hearts were harvested for experiments. Age-matched *ATG3*$^{loxP/loxP}$ mice without Cre were injected with the same amount of tamoxifen as WT control. Representative blots are shown. n = 3 per group. (**B**) Heart weight of WT and ciAtg3 KO mice, 1 week after last tamoxifen injection. n = 7–8. Data are mean ± SEM. An unpaired t test was used to determine statistical significance between two groups. *P