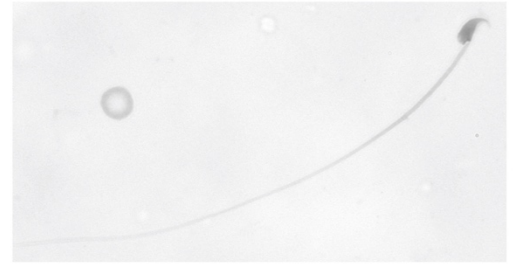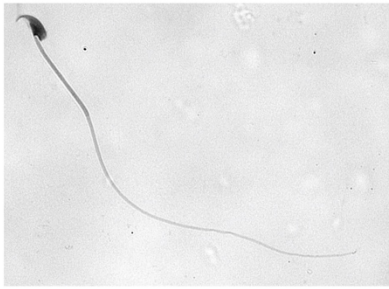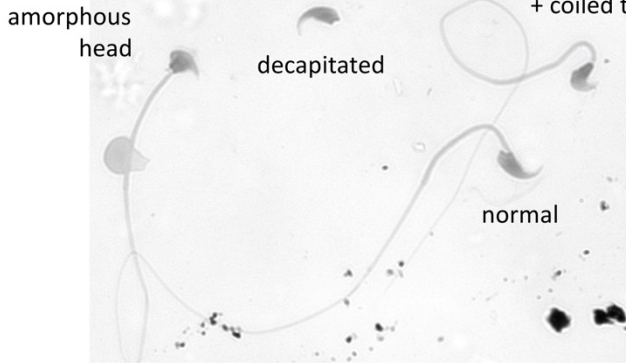**Supplementary File 7:** Detailed parameters of mouse sperm morphology. Statistically significant values: p < 0.05; ns – statistically not significant (p ≥ 0.05). For samples with normal distribution (positive Shapiro-Wilk normality test), t-test with Welch's correction was applied; for samples without normal distribution (midpiece and tail defects), Kolmogorov-Smirnoff test was applied (GraphPad Prism v. 7.0e). n=200 spermatozoa were analyzed per each mouse; for WT and *Tcte1*^{-/-} n=5 animals were evaluated, while for *Tcte1*^{-/+} the number of animals was n=7. Spermatozoa stained with the classic Papanicolau staining procedure. Bright field microscope: Leica DM5500, magnification 630x (with immersion), software: CytoVision.

sperm morphology		genotype	% [mean ± SD]	*Tcte1*^{-/-} vs. *Tcte*^{+/-}	*Tcte1*^{-/-} vs. WT	*Tcte1*^{+/-} vs. WT
					p value	
normal		*Tcte1*^{-/-}	35.41 ± 9.10			
		Tcte^{+/-}	71.94 ± 8.97	< 0.0001	0.0009	ns
		WT	70.81 ± 11.78			
abnormal	**head defects:**					
	sum	*Tcte1*^{-/-}	95.08 ± 2.49			
		Tcte^{+/-}	65.83 ± 23.60	0.0163	ns	ns
		WT	84.33 ± 11.89			
	hook less	*Tcte1*^{-/-}	1.30 ± 1.72			
		Tcte^{+/-}	3.07 ± 4.21	ns	ns	ns
		WT	2.81 ± 2.68			
	big size	*Tcte1*^{-/-}	1.65 ± 1.22			
		Tcte^{+/-}	3.03 ± 2.95	ns	ns	ns
		WT	0.71 ± 1.60			
	small size	*Tcte1*^{-/-}	0.36 ± 0.81			
		Tcte^{+/-}	0	ns	ns	ns
		WT	0			
	amorphous	*Tcte1*^{-/-}	26.11 ± 6.35			
		Tcte^{+/-}	33.72 ± 13.00	ns	0.0011	0.0314
		WT	48.88 ± 7.83			
	banana shaped	*Tcte1*^{-/-}	13.11 ± 9.30			
		Tcte^{+/-}	6.85 ± 7.16	ns	ns	ns
		WT	8.59 ± 5.05			
	decapitated	*Tcte1*^{-/-}	52.55 ± 14.24			
		Tcte^{+/-}	19.16 ± 9.33	0.0039	0.0073	ns
		WT	23.33 ± 10.79			
	midpiece defects:					
	sum	*Tcte1*^{-/-}	0.38 ± 0.55			
		Tcte^{+/-}	9.71 ± 12.64	0.0417	0.0079	ns
		WT	8.20 ± 11.42			
	thin	*Tcte1*^{-/-}	0.38 ± 0.55			
		Tcte^{+/-}	0	ns	ns	ns
		WT	0.87 ± 1.27			
	folded	*Tcte1*^{-/-}	0			
		Tcte^{+/-}	9.71 ± 12.64	0.0366	0.0476	ns
		WT	7.33 ± 11.98			
	tail defects:					
	sum	*Tcte1*^{-/-}	4.54 ± 2.79			
		Tcte^{+/-}	24.46 ± 24.65	0.0006	ns	0.0006
		WT	7.47 ± 4.06			
	short	*Tcte1*^{-/-}	0			
		Tcte^{+/-}	0.18 ± 0.47	ns	ns	ns
		WT	0.26 ± 0.59			
	folded	*Tcte1*^{-/-}	0			
		Tcte^{+/-}	0.18 ± 0.47	ns	ns	ns
		WT	1.93 ± 3.23			
	coiled	*Tcte1*^{-/-}	4.54 ± 2.79			
		Tcte^{+/-}	23.94 ± 25.12	0.0008	ns	0.0005
		WT	5.33 ± 2.43			
	double	*Tcte1*^{-/-}	0			
		Tcte^{+/-}	0.17 ± 0.45	ns	ns	ns
		WT	0			

NORMAL SPERMATOZOA

ABNORMAL SPERM MORPHOLOGY
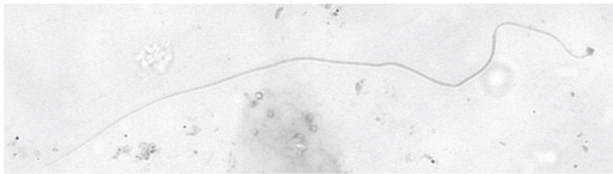

amorphous head
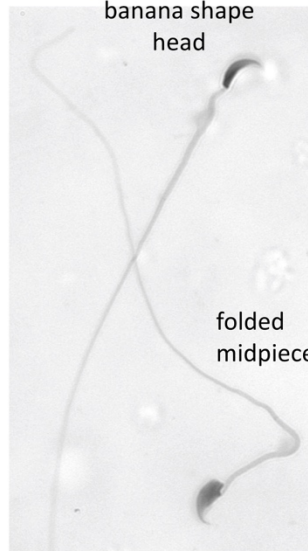
amorphous head + coiled tail

decapitated

normal

hook less head
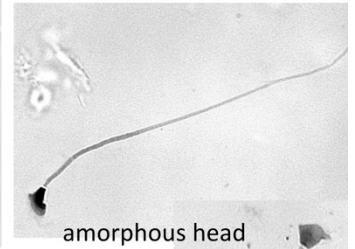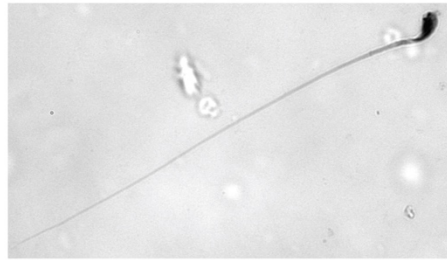
amorphous head

small head + thin midpiece
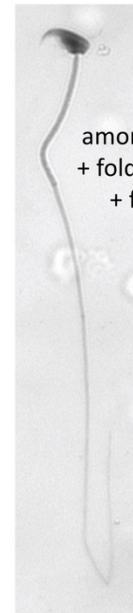
banana shape head

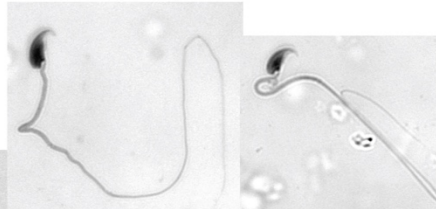amorphous head + folded midpiece + folded tail
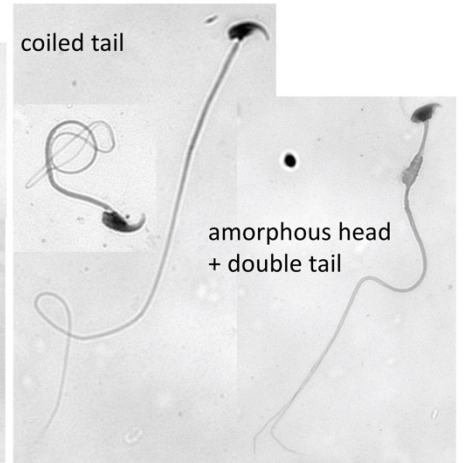
amorphous head

big head

folded midpiece
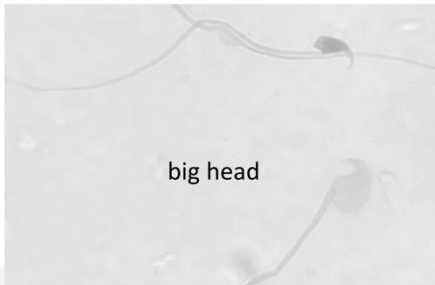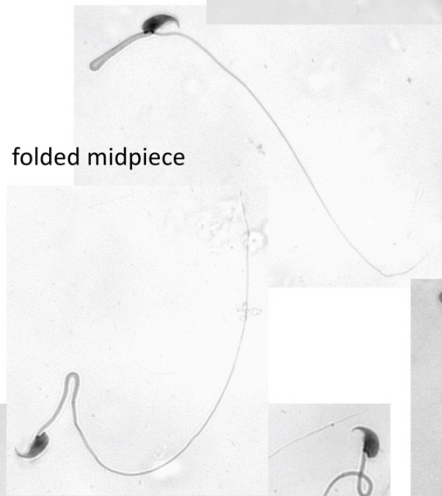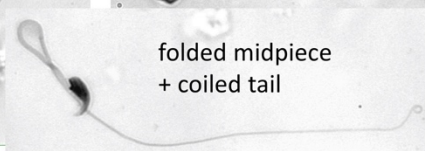
folded midpiece

folded midpiece + folded tail

coiled tail

amorphous head + double tail

folded midpiece + coiled tail

short tail