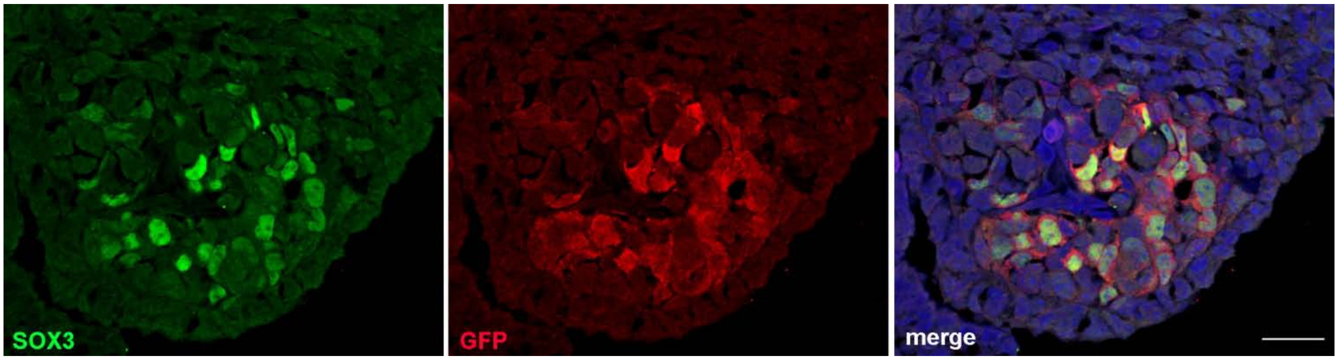
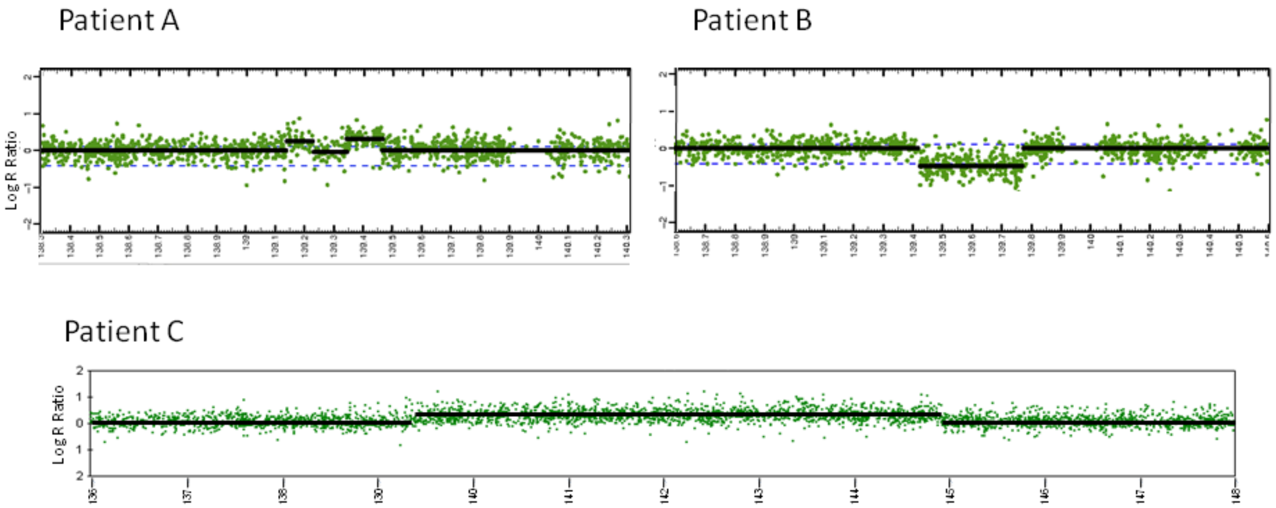
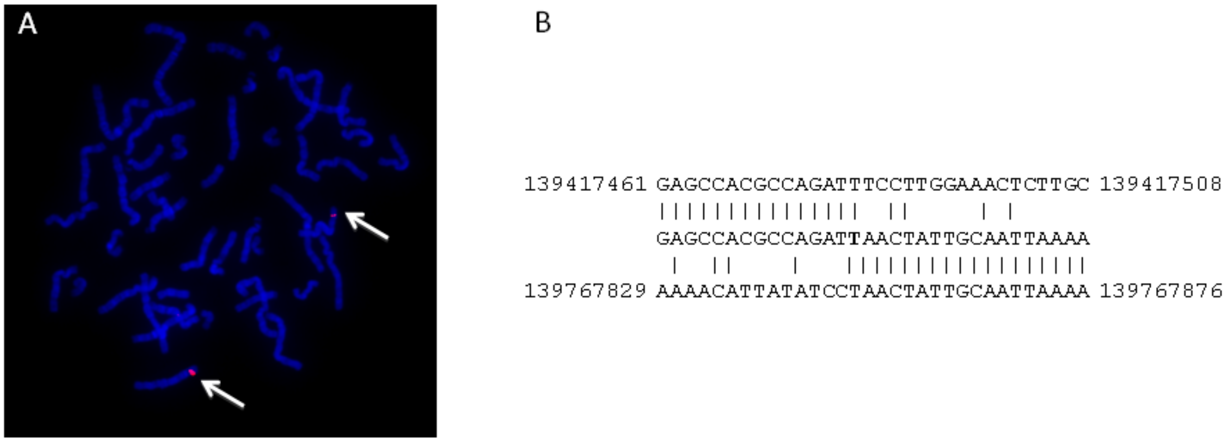


Supplementary Figure 1. SOX3 and EGFP are coexpressed in transgenic gonads. 2 µm z-stack of transverse optical slices of an XX Tg/+ 17ts UGR stained with SOX3 (green) and GFP (red) antibodies. Note that SOX3 is nuclear and EGFP is expressed throughout the cell. Scale bar 25 µm.



Supplementary figure 2. Partial microarray results for the X chromosome showing rearrangements identified in the three patients. Each green point represents a probe covering a specific genomic locus, with the y axis representing a normalised signal intensity proportional to copy number. The estimated copy number is indicated by the horizontal black lines. DNA from patient A and B was hybridized to the Affymetrix 6.0 whole genome SNP microarray and analysed with Affymetrix AROMA. DNA from patient C was hybridized to the Illumina 1M array and analysed with CNV partition v2.3.4 on Illumina Genome Studio.



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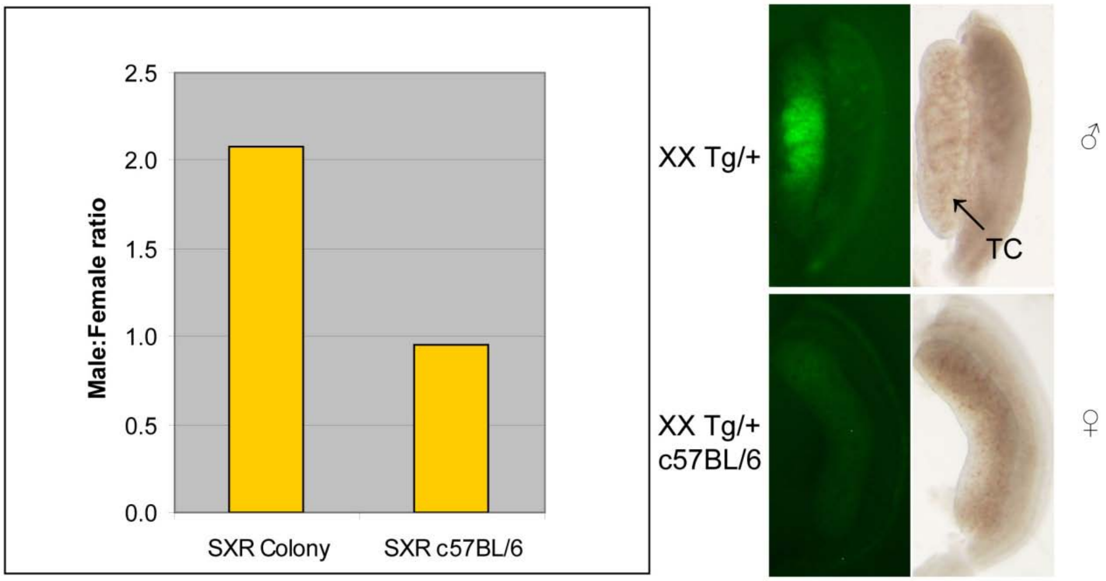
Supplementary figure 3. A) Representative FISH results on metaphase chromosomes from patient A, using the BAC probe RP11-51C14. Only two signals can be seen on the two X chromosomes, ruling out a transposition or translocation. The signal intensity on one chromosome is markedly greater than on the other chromosome, consistent with the duplication identified by both microarray and MLPA analysis and supporting a tandem duplication. B) Sequence around the breakpoint of the deletion identified in patient B. The middle line is the breakpoint sequence, with homology to the genomic sequence above and below indicated by vertical bars. The numbers correspond to nucleotide position on the X chromosome, based on reference sequence hg18.



Supplementary Figure 4. Reduced penetrance of XX male sex reversal in Sr mice correlates with increased contribution of C57BL/6 background. (Left panel) Graph showing male:female ratio of the Sr colony maintained on a F1 (C57BL/6 x CBA) genetic background (2.1:1, n = 522) and in Tg/+ F1 males mated with C57BL/6 females (0.95:1, n = 60). (Right panel) Comparison of 13.5 dpc XX Tg/+ gonads with F1 (top) and enriched C57BL/6 genetic backgrounds (bottom). Note the diminished EGFP expression, lack of testis cords and ovarian morphology of the latter.