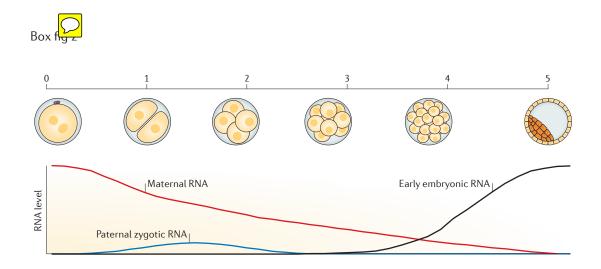
## **Author notes**

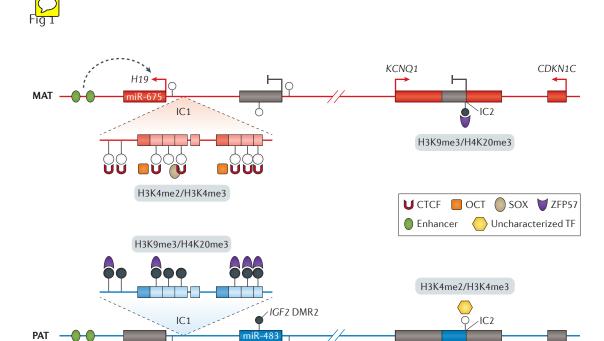
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- Do the figures convey the intended message?
- Are all the labels accurate and in the right place?
- Are all the arrows in the right place?
- Are any chemical structures correct?
- Have shapes and colours been used consistently and accurately throughout the figures?
- Have any of the figures been previously published, or have they been supplied by a colleague(s) who is not a named author on the article?

To mark up any corrections, please use the commenting tools in the PDF, or print and draw by hand, rather than directly editing the PDFs.



KCNQ1OT1



IGF2 DMR0

IGF2

`H19 prom



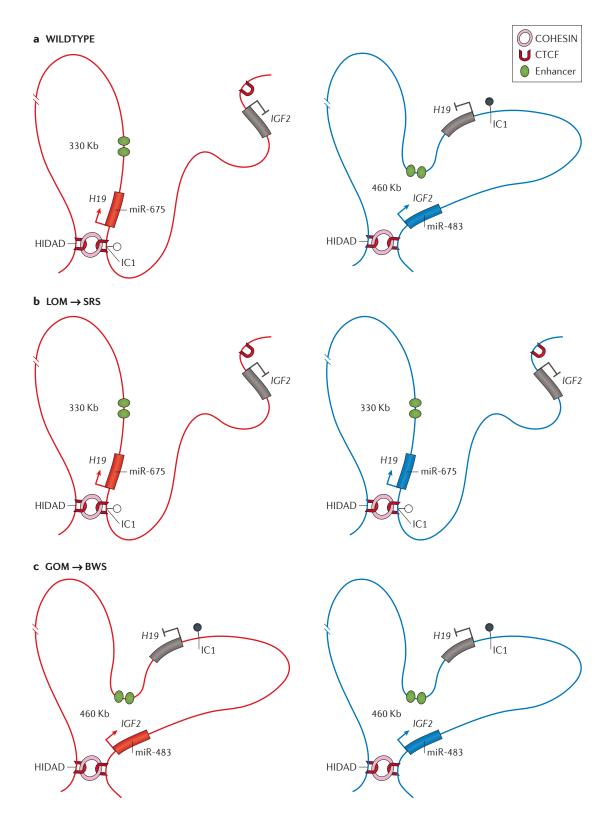


Fig 3

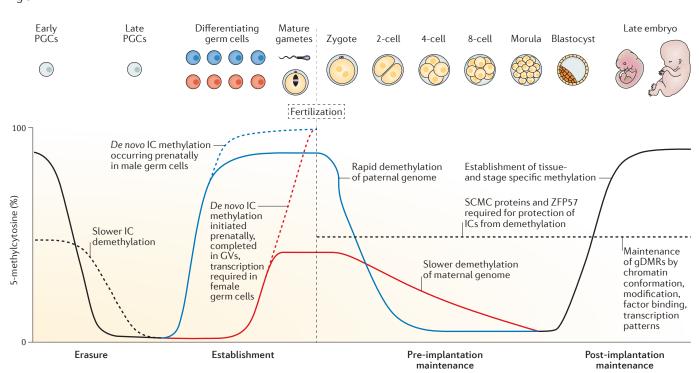
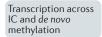


Fig 4 **a** Defective erasure in PGCs



**b** Defective establishment in oocyte caused by transcription alteration







Defective transcription across IC and lack of *de novo* methylation

c Defective establishment in oocyte caused by oocyte factor

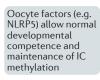






Defective oocyte factor and lack of establishment of oocyte-specific IC methylation

d Defective maintenance in pre-implantation embryo caupy oocyte factor





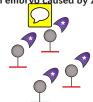


Defective oocyte factor, developmental competence and MLID

e Defective maintenance in pre-implantation embryo caused by zygotic factor







Defective zygotic factor (e.g. ZFP57) and MLID

 $f \ \ \ \mbox{Defective maintenance in pre-implantation embryo caused by alteration of factor binding to methylated IC}$ 

Binding of factors (e.g. ZFP57) on methylated IC allows protection from IC demethylation





Defective target site of zygotic factor (e.g. ZFP57) and IC LOM

g Defective maintenance in post-implantation embryo caused by alteration of factor binding to unmethylated IC

Binding of factor (e.g. CTCF/OCT) on unmethylated IC allows protection from IC methylation





Defective target site of factor (e.g. CTCF/OCT) on unmethylated IC and IC GOM

6

7



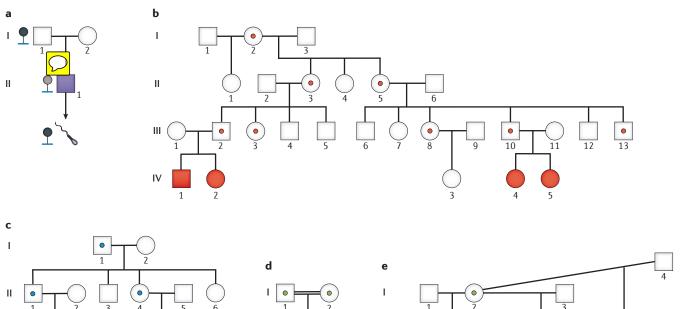


Fig 6

