**Ex**pert **G**uided Data **C**leaning and **R**econstructio**n** (**ExGCRn**) procedure

***Expert input:***

Param1: Threshold for aneuploidy D.I.

Param2: Mean D.I. value for mitotic cell population

Param3: Standard deviation for mitotic and aneuploidy cell populations

Param4: Ratio of normal cell (both normal and mitotic) vs. aneuploidy when three populations observed

Param5: Ratio of normal cell (both normal and mitotic) vs. aneuploidy when no aneuploidy population observed

Param6: Ratio of normal cell vs. mitotic population when no aneuploidy population observed

***Preparation phase***

Read in raw DNA index values (D.I. value)

Determine how many cell populations exist in the exfoliated cell population

**If** three populations determined

Use expert guided parameter set (param4)

**Else If** no aneuploidy population observed

**If** no mitotic population observed

Use expert guided parameter set (param2, param3, param6)

**Else**

Use expert guided parameter set (param2, param3, param5)

***Stripping the normal population***

Step 1

Step 2

***Stripping the mitotic population***

Step 1

Step 2

***Data reconstruction***

Step 1

Step 2