

**Table S3:** A modified Newcastle-Ottawa Scale for assessment of study quality

Category	Scoring Criteria
<b>Selection</b> (Maximum score: 2 stars)	<b>Representativeness of the cohort</b>
	Truly representative (1 star)
	Somewhat representative (1 star)
	Highly selected group (No star)
	No description (No star)
	<b>Ascertainment of exposure</b>
	Secure record (1 star)
	Directly measured (1 star)
	Written self-report (No star)
	No description (No star)
<b>Comparability</b> (Maximum score: 2 stars)	<b>Comparability of cohort, controlling of confounders</b>
	Controls of key confounders and related factors (eg. Testicular cancer, genetic defects, smoking, environmental exposure, etc.) (1 star)
	Uncontrolled for confounders (No star)
	<b>Baseline characteristics</b>
	Demographic and clinical characteristics of study population presented (1 star)
<b>Outcome</b> (Maximum score: 6 stars)	No description (No star)
	<b>Assessment of outcome</b>
	Record linkage (1 star)
	Self-report (No star)
	No description (No star)
	<b>Assessment of oxidative stress and Sperm DNA damage</b>
	Assessment of ORP (1 star)
	Assessment of SDF (1 star)
	No description (No star)
	<b>Adequacy of sample size</b>
	<b>Number of samples analyzed <math>\geq 100</math></b>
	Number of samples analyzed equal to the number of subjects in the group (1 star)
	More than or equal to 80% of the sample analyzed or description for the exclusion provided (1 star)
	Less than 80% of the sample analyzed and no description for the exclusion (No star)
	Number of samples analyzed <100 (No star)
	No description (No star)
	<b>Correlation between ORP and SDF</b>
	Fertile men/ donor group (1 star)
	Infertile men (1 star)
	No description (No star)
	Others (No star)

**Good quality:** 2/4 stars for selection, 1/2 stars for comparability, 5/6 stars for outcome

**Fair quality:** 1/4 stars for selection, 1/2 stars for comparability, 4/6 stars for outcome

**Poor quality:** 0/4 stars for selection, 0/2 stars for comparability, 3/6 stars for outcome