

**Table S1**

**Comparison of Significant Different between Talazoparib, Calcitriol and their combination in Cell Migration Assay using Anova SPSS– (BT-20)**

**Cell Migration**

|             | Control | Talazoparib | Calcitriol | T+C     |
|-------------|---------|-------------|------------|---------|
| Control     |         | 0.132       | 0.347      | <0.001* |
| Talazoparib | 0.132   |             | 0.007*     | <0.001* |
| Calcitriol  | 0.347   | 0.007*      |            | <0.001* |
| T+C         | <0.001* | <0.001*     | <0.001*    |         |

\* p < 0.05

**Table S2**

**Comparison of Significant Different between Talazoparib, Calcitriol and their combination in Cell Migration Assay using Anova SPSS– (MDA-MB-468)**

**Cell Migration**

|             | Control | Talazoparib | Calcitriol | T+C     |
|-------------|---------|-------------|------------|---------|
| Control     |         | <0.001*     | <0.001*    | <0.001* |
| Talazoparib | <0.001* |             | 0.504      | 0.504   |
| Calcitriol  | <0.001* | 0.504       |            | 1.00    |
| T+C         | <0.001* | 0.504       | 1.00       |         |

\* p < 0.05

**Table S3****Comparison of Significant Different between Talazoparib, Calcitriol and their combination in Annexin V/PI Flow Cytometry using Anova SPSS– (BT-20)****Viable**

|             | Control | Talazoparib | Calcitriol | T+C     |
|-------------|---------|-------------|------------|---------|
| Control     |         | 0.972       | <0.001*    | <0.001* |
| Talazoparib | 0.972   |             | <0.001*    | <0.001* |
| Calcitriol  | <0.001* | <0.001*     |            | <0.001* |
| T+C         | <0.001* | <0.001*     | <0.001*    |         |

**Early Apoptosis**

|             | Control | Talazoparib | Calcitriol | T+C   |
|-------------|---------|-------------|------------|-------|
| Control     |         | 0.99        | 1.00       | 0.451 |
| Talazoparib | 0.99    |             | 1.00       | 0.364 |
| Calcitriol  | 1.00    | 1.00        |            | 0.508 |
| T+C         | 0.451   | 0.364       | 0.508      |       |

**Late Apoptosis**

|             | Control | Talazoparib | Calcitriol | T+C     |
|-------------|---------|-------------|------------|---------|
| Control     |         | 1.00        | <0.001*    | <0.001* |
| Talazoparib | 1.00    |             | <0.001*    | 0.997   |
| Calcitriol  | <0.001* | <0.001*     |            | <0.001* |
| T+C         | <0.001* | 0.997       | <0.001*    |         |

**Necrosis**

|             | Control | Talazoparib | Calcitriol | T+C     |
|-------------|---------|-------------|------------|---------|
| Control     |         | 0.569       | <0.001*    | 0.976   |
| Talazoparib | 0.569   |             | <0.001*    | 0.921   |
| Calcitriol  | <0.001* | <0.001*     |            | <0.001* |
| T+C         | 0.976   | 0.921       | <0.001*    |         |

\* p &lt; 0.05

**Table S4**

**Comparison of Significant Different between Talazoparib, Calcitriol and their combination in Annexin V/PI Flow Cytometry using Anova SPSS – (MDA-MB-468)**

**Viable**

|             | Control | Talazoparib | Calcitriol | T+C     |
|-------------|---------|-------------|------------|---------|
| Control     |         | <0.001*     | 0.094      | <0.001* |
| Talazoparib | <0.001* |             | <0.001*    | 0.003*  |
| Calcitriol  | 0.094   | <0.001*     |            | <0.001* |
| T+C         | <0.001* | 0.003*      | <0.001*    |         |

**Early Apoptosis**

|             | Control | Talazoparib | Calcitriol | T+C     |
|-------------|---------|-------------|------------|---------|
| Control     |         | <0.001*     | 0.766      | <0.001* |
| Talazoparib | <0.001* |             | <0.001*    | 0.378   |
| Calcitriol  | 0.766   | <0.001*     |            | <0.001* |
| T+C         | <0.001* | 0.378       | 0.000005*  |         |

**Late Apoptosis**

|             | Control | Talazoparib | Calcitriol | T+C     |
|-------------|---------|-------------|------------|---------|
| Control     |         | 0.003*      | 0.826      | <0.001* |
| Talazoparib | 0.003*  |             | 0.014*     | 0.172   |
| Calcitriol  | 0.826   | 0.014*      |            | 0.001*  |
| T+C         | <0.001* | 0.172       | 0.001*     |         |

**Necrosis**

|             | Control | Talazoparib | Calcitriol | T+C    |
|-------------|---------|-------------|------------|--------|
| Control     |         | 0.015*      | 0.998      | 0.027* |
| Talazoparib | 0.015*  |             | 0.023*     | 0.993  |
| Calcitriol  | 0.998   | 0.023*      |            | 0.041* |
| T+C         | 0.027*  | 0.993       | 0.041*     |        |

\* p < 0.05

**Table S5****Comparison of Significant Different between Talazoparib, Calcitriol and their combination in Cell Cycle Analysis using Anova SPSS– (BT-20)****G0/G1 phase**

|             | Control | Talazoparib | Calcitriol | T+C     |
|-------------|---------|-------------|------------|---------|
| Control     |         | <0.001*     | <0.001*    | <0.001* |
| Talazoparib | <0.001* |             | <0.001*    | 0.005*  |
| Calcitriol  | <0.001* | <0.001*     |            | <0.001* |
| T+C         | <0.001* | 0.005*      | <0.001*    |         |

**S phase**

|             | Control | Talazoparib | Calcitriol | T+C     |
|-------------|---------|-------------|------------|---------|
| Control     |         | <0.001*     | <0.001*    | <0.001* |
| Talazoparib | <0.001* |             | <0.001*    | 0.073   |
| Calcitriol  | <0.001* | <0.001*     |            | <0.001* |
| T+C         | <0.001* | 0.073       | <0.001*    |         |

**G2/M phase**

|             | Control | Talazoparib | Calcitriol | T+C     |
|-------------|---------|-------------|------------|---------|
| Control     |         | <0.001*     | <0.001*    | <0.001* |
| Talazoparib | <0.001* |             | <0.001*    | 0.004*  |
| Calcitriol  | <0.001* | <0.001*     |            | <0.001* |
| T+C         | <0.001* | 0.004*      | <0.001*    |         |

\* p < 0.05

**Table S6****Comparison of Significant Different between Talazoparib, Calcitriol and their combination in Cell Cycle Analysis using Anova SPSS– (MDA-MB-468)****G0/G1 phase**

|             | Control | Talazoparib | Calcitriol | T+C     |
|-------------|---------|-------------|------------|---------|
| Control     |         | <0.001*     | 0.004*     | <0.001* |
| Talazoparib | <0.001* |             | <0.001*    | 0.078   |
| Calcitriol  | 0.004*  | <0.001*     |            | 0.007*  |
| T+C         | <0.001* | 0.078       | 0.007*     |         |

**S phase**

|             | Control | Talazoparib | Calcitriol | T+C   |
|-------------|---------|-------------|------------|-------|
| Control     |         | 0.428       | 0.998      | 0.998 |
| Talazoparib | 0.428   |             | 0.493      | 0.491 |
| Calcitriol  | 0.998   | 0.493       |            | 1.00  |
| T+C         | 0.998   | 0.491       | 1.00       |       |

**G2/M phase**

|             | Control | Talazoparib | Calcitriol | T+C    |
|-------------|---------|-------------|------------|--------|
| Control     |         | 0.176       | 0.243      | 0.106  |
| Talazoparib | 0.176   |             | 0.006*     | 0.954  |
| Calcitriol  | 0.243   | 0.006*      |            | 0.005* |
| T+C         | 0.106   | 0.954       | 0.005*     |        |

\* p < 0.05