CLAIMS

1. Use of a thiazol-2-yl-isonicotinamide compound and a second chemotherapeutic agent in the manufacture of a medicament for combination treatment of a neoplastic cell, wherein the second chemotherapeutic agent is selected from the group consisting of Taxol, Doxorubicin and Topotecan, and the thiazol-2-yl-isonicotinamide compound is selected from the group consisting of N-(4-(4-isopropoxy-2,6-dimethylphenyl)thiazol-2-yl)isonicotinamide (100951), N-(4-(4-(4-methoxyphenoxy)-2,6-dimethylphenyl)thiazol-2-yl)isonicotinamide (101001), 2-fluoro-N-(4-(4-(4-methoxyphenoxy)-2,6-dimethylphenyl)thiazol-2-yl)isonicotinamide (101015), N-(4-(4-(5-(2-methoxyethoxy)pyrazin-2-yloxy)-2,6-dimethylphenyl)thiazol-2-yl)isonicotinamide (110091), N-(4-(4-(5-(2-methoxyethoxy)pyrazin-2-ylthio)-2,6-dimethylphenyl)thiazol-2-yl)isonicotinamide (110095), and N-(4-(4-(5-(2-(dimethylamino)ethoxy)pyrazin-2-ylthio)-2,6-dimethylphenyl)thiazol-2-yl)isonicotinamide, and their salt forms;
and wherein the neoplastic cell has an increased expression level of Hec1 relative to the corresponding reference result of a non-neoplastic cell, and/or a mutated or deleted form of at least one of Rb and p53 relative to the corresponding reference result of a non-neoplastic cell.

2. The use of claim 1, wherein the neoplastic cell is a neoplastic cell of leukemia, cervical cancer, breast cancer, and liver cancer.

3. The use of claim 1 or 2, wherein the increased expression level of Hec1 or the mutated or deleted form of at least one of Rb and p53 is determined by quantification of a nucleic acid encoding Hec1, Rb, or p53.

4. The use of claim 1 or 2, wherein the increased expression level of Hec1 or the mutated or deleted form of at least one of Rb and p53 is determined by sequencing or hybridization or a combination of both of a nucleic acid encoding Hec1, Rb, or p53.

5. The use of claim 1 or 2, wherein the increased expression level of Hec1 or the mutated or deleted form of at least one of Rb and p53 is determined by quantification of Hec1 protein, Rb protein, and p53 protein.