

CLAIMS

1. A method of (i) screening for an anti-cancer agent, (ii) assessing a pharmaceutical agent for treating or preventing a human cancer, or (iii) searching for an anti-cancer agent
5 target, wherein assessment is carried out, using as an indicator, hierarchical organization of a cancer tissue, cancer progression process, or a biological property, which is unique to pathology of a human cancer, in a non-human animal model transplanted with an NOG-established cancer cell line or in an *in vitro* culture system of an NOG-established cancer cell line,

10 wherein the hierarchical organization unique to pathology of a human cancer is a two-layer structure having an area with a glandular structure consisting of cells with epithelial-like differentiation and an invasive area with cells having a tendency to differentiate into mesenchymal cells, and

15 wherein the cancer is colon cancer, stomach cancer, breast cancer, lung cancer or pancreatic cancer;

which comprises the steps of:

- (1) culturing *in vitro* an NOG-established cancer cell line to mimic a biological property or a structure characteristic of each cancer progression process;
- (2) assessing the expression of DNA, RNA, or protein in a cultured cell mimicking a
20 specific structure; and
- (3) identifying a gene or protein in the cultured cell that changes in a manner dependent of the hierarchical organization, cancer progression process, or biological property of a cancer cell.