Companion Diagnostics
Making healthcare personal

Roche’s way to innovate healthcare is the clear shift from an ‘equal shares for all’ principle toward a target oriented and response-guided therapy management. Companion Diagnostics is our strategy about how a diagnostic solution is useful in the safe and effective appliance of a medication. As an integral solution from Roche, it enables health professionals to manage a disease from early detection to response-guided medication.

In particular Companion Diagnostics as an in-vitro medical device or test has been validated in a robust, controlled clinical trial and is pivotal in directing patient therapy. Associated with a specific pharmaceutical impact, companion solutions improve the benefit-risk ratio of medical decision making and treatment. Roche has already begun to add true medical value for health professionals and patients by fitting treatment solutions to different groups of patients.

Fig.1: Personalized Healthcare means the right therapy for the right group of patients at the right time

With its response-guided therapy for hepatitis C personalized medicine is not a vision but a reality with Roche today. For example patients undergoing peginterferon alfa-2a and ribavirin therapy can be adequately diagnosed and monitored for chronic HCV infection and its treatment success.
HCV Testing enables physicians to identify acute and chronic infection and the amount of virus in the patient’s blood. Treatment can be tailored to specific sub-groups of patients accordingly.

**Infection with the Human Papilloma Virus (HPV)**

One of the most pioneering medical discoveries of recent times is that persistent infection with certain types of human papilloma virus (HPV) can progress to pre-cancerous neoplasia or cervical cancer in women. Early detection of high risk infection allows prevention and early treatment, thus improving outcomes in cervical cancer. By providing physicians with a practical way to apply this knowledge, Roche’s diagnostic tools help to detect infection with the HPV types that have the highest risk of progressing to cervical cancer. Moreover, Roche is helping to deliver tangible benefits to patients - early detection of high-risk HPV infection enables earlier treatment and thus saves lives.

**Skin cancer**

One example for our promising pipeline projects is a candidate drug and diagnostic test in co-development for metastatic melanoma. In approximately 50% of melanoma patients, a mutant gene carried in the tumour itself, BRAF V600, appears to be responsible for uncontrolled cell growth. The BRAF V600 mutation test from Roche detects the BRAF V600E mutation in formalin-fixed, paraffin-embedded (FFPET) human melanoma tissue. It is designed to help select patients for treatment with vemurafenib, an oral medicine designed to treat patients whose melanoma tumors harbor a mutated form of the BRAF gene.

**Outlook**

Expertise in molecular biology and clinical research as well as both diagnostic and pharmaceutical in-house experience will allow Roche to continue driving Personalised Healthcare forward. Taking advantage of its unique position, Roche is already delivering Personalised Healthcare approaches. Personalised Healthcare is a key element of the company’s core strategy, and will benefit patients who are in need of better or new medications.