

We Hear From

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Anil Kumar Ghosh

A Personalized treatment for cancer prevention within 10 years

The personalized medicine was the central theme of Medica, the world's biggest medicine fair which was held during 20th to 23rd November 2013 in Düsseldorf. In Hamburg the goals of the fair were already fixed. The individualized cancer therapy has been written on the placard by the firm Indivumed and its sister concern Indivutest.

"Any tumor appears different from other, therefore, the personalized drug is specially meaningful in oncology" emphasizes Hartmurt Juhl. The experienced surgeon is today business executive of the society of both the concerns in Hamburg. An Indivutest the scientific method of cancer research is applied which was used previously exclusively in research. To that already the generation of cancer tissue problem under scientific control must be taken place which is seldom guaranteed in a routinely run hospital.

An important factor for the exact analysis of tissue is the immediate freezing after the extraction through surgical operation or biopsy in fluid nitrogen in 180°C. Numerous studies have shown that the biological phenomenon in cancer cell changes such that the relevant invasive points for new active substance (hormone) are no more definitely authentic" justifies Juhl.

With the following tissue analysis, there experimental methods are combined in order to acquire the most likely comprehensive picture of individual tumor biology and possible therapeutic arrangement. Sequencing of tumor DNA (so-called next generation sequencing) evidence of definite invasion points with the help of automatic tissue color method (immune histo chemistry) and proof of activity of egg white molecules, are impor-

tant for the regulation of cancer growth (phosphoprotein analysis). The sequencing serves to determine the cancer relevant changes in DNA which are responsible for the cancer occurrence and at the time give an indication of the effectiveness of medication. The combination of the three methods make it possible also after medication to investigate there on the special diseases, as for example breast, lungs or skin cancer which are normally not taken into consideration. Under circumstances the active substances (hormone, vitamin) can be kept away which usually come as insertion whose invasion point cannot be identified. Through that the side-effects are reduced.

We have already added more than 50 permitted oncological pharmaceutical preparations; more than additional 800 are already in clinical development. With that our possibilities clearly increase in order to combat cancer, emphasizes Juhl. In view of the fact that at present yearly about 213000 deaths have occurred in Germany and the cancer therapy without cure costs the health system with 11.7 milliard Euro which is urgent without question. Therefore it gives also a far reaching consensus of all participations of pharma industries. Regulating authority, cost bearers, hospitals and patients that the individualized cancer therapy must come and will be coming.

In the central point of argument therefore stand cost reductions, a higher effectiveness and raising the quality of life through objective. Therapies are also to avoid insensible treatment as for example the use of productive brand in the pharma-development out of economical basis for the industry is existentialist. While the costs

per medication has reached in between converted into about 670 million Euro but 90% of the active substances (vitamin/hormone) refuse in the last phase of clinical studies when a big portion of money is already spent.

With greater knowledge about cancer which has grown enormously in the past years. The complexity of individual cancer in respect of available active substances certainty to be understood better. Today potential invasive points although on the cell surface as also in the cell regulation are available. DNA changes are known for casual reasons for cell transformation and on the other hand generate the invasive points. The evidence of tumor – DNA is rather possible in blood and therefore opens therapy surveillance.

In order to bring ahead personalized medicine further firm individual work together with clinical partners like George Town University Medical Centre or Washington Hospital Centre and with academic partners as the university clinic Lamburg-Eppendorf John Hop-

kins and Stanford University as also the American National Cancer Institute.

One step is the development of a cooperative databank with tissue probe of cancer patients. If may still continue for 5 to 10 years till the individualized cancer therapy for everyone is available. Till that period the cost of 5000 Euro for every detailed experiment could be borne by the health insurance.

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