In industrial nations, more people die of cardiac-circulatory diseases than of all cancer diseases and accidents put together. Today, "Balloon dilatation" is complemented in most cases, by the implantation of stents (vascular supports made of fine metal network). This applies particularly to the newly developed drug-eluting stents with which restenosis can be completely prevented in most cases. Today, the technique of balloon dilatation with the implantation of stents is also the best-possible therapy, for reopening constricted infarction vessels for patients of acute cardiac infarction. The long-term consequences of infarction can thus be severely reduced or completely eliminated. As opposed to the treatment of acute myocardial infarction with thrombolytic agents only, catheter intervention clearly improves the long-term survival. The department has the most experience in these methods of treatment worldwide.

100,000 Germans die of sudden heart failure each year. One of the duties of the German Heart Centre is to detect the inherent risk of dying through sudden heart failure. The most modern methods are available for diagnosis: Electro-physiological examinations with controllable catheters allow for a precise insight into the conditions of blood conveyance in the heart during heartbeat. Life-threatening arrhythmia can be eliminated through the implantation of pacemakers with defibrillator function. Patients with life-threatening diseases are treated in intensive-care units with new monitoring methods and techniques of diagnosis, highly-developed respiratory and dialysis devices, endoscopic techniques as well as mechanical cardio-circulatory support systems.

Emergency patients can benefit from the services of the clinic round-the-clock in seven days of the week. The clinic occupies a leading position worldwide in cardiac catheter operations in emergency cases.

In the field of science, the clinic combines cardio-vascular fundamental research with clinical research.
Contributions to adult cardiology

- Improvement of interventional treatment of acute cardiac infarction
- Optimization of the concomitant medical treatment of acute coronary syndromes
- Problem of restenosis following balloon catheter dilatation and stent implantation
- Optimization of the technique of stent implantation and long-term results
- Development and testing of drug-eluting stents
- New therapy concepts in the application of platelet aggregation inhibitors, fundamental research on the function of blood platelets and the physiology of coronary arteries
- Molecular cardiology: Identification and analysis of the vessel-constricting processes and genetic pressure factors
- Quantitative coronary arteriography, intracoronary ultrasound examination and the Doppler velocity measurement
- Regional myocardial blood flow in case of the coronary heart disease pharmaco-therapy of coronary heart disease
- Regional myocardial blood flow in case of the coronary heart disease
- Pharmaco-therapy of coronary heart disease
- Nitrate tolerance - Concepts of avoiding tolerance
- Quantification and the catheter-supported therapy of diseases associated with cardiac hypertrophy (“hypertrophy obstructive cardiomyopathy”)
- Quantification of stenotic valvular diseases and valvular regurgitations by means of the Doppler and colored Doppler-Echocardiography as well as trans-esophageal echocardiography
- Criteria for the optimal period of surgery in case of cardiac valve dysfunction
- Long-term examinations after the substitution of cardiac valve and balloon catheter valvoplasty
- Pharmacotherapy and drug interactions in case of cardiac insufficiency
- Irregularity of pulse: Complex systems of pacemaker, implantable cardiovert-defibrillators, highly amplified ACG, catheter ablation, deflection of monophasic action potentials
In years past it was said that cardiologists are only responsible for making the diagnosis. Someone else did the treating and operating… This is no longer the case. Most of our patients are diagnosed and treated right here in our department. In the meantime less than 10% of our patients require surgery. We treat most of the patients ourselves on a long-term basis.

One of your instruments is a balloon. What do you do with it? This balloon is inserted with a catheter into a diseased coronary artery. Up to the point where the vessel is constricted. The balloon is then inflated and the constriction dilated so that the blood flow can be restored. This procedure is called balloon dilatation.

And it helps for severe constriction? Yes, often. In case the balloon dilatation is not successful, we insert a fine metal tube into the vessel to provide stability and to avoid renewed constriction. The tube is called stent. Balloon dilatation and stent implantation are two of the most significant developments in our field over the past years. They have fundamentally changed the treatment of patients with coronary diseases and will also do so in the future.

Could you explain this further? In the last few years it has been shown that drug-eluting stents are associated with a substantially lower rate of restenosis. This means that a patient rarely needs a bypass operation currently. This type of stent is increasingly replacing the uncoated stents and is, therefore, one of the most important innovations.

In spite of the advances, heart disease continues to be the number one cause of death in the industrialized nations. Correct, heart disease is responsible for many more deaths than all forms of cancer combined. This in spite of outstanding advances in our field – as opposed to treatment of cancer in which the colleagues are still waiting for a break-through. However, I am optimistic that cardiac death will no longer be in first place in ten years time.

It is said that the technical facilities for treatment of acute myocardial infarction are already optimal?
That may be, but they are not being used or not being used early enough. The truth is that most patients have to wait too long for the right treatment or they are initially admitted to a hospital where targeted treatment is not available.

You are the initiator of the "Munich Infarction Model" intended to guarantee the best possible treatment for patients with acute myocardial infarction. What changes should this specifically bring about?

Our goal is that patients be admitted directly in the appropriate hospital. Without loss of time, we can ensure that all patients in the Munich area will be treated immediately at a qualified heart centre. The infrastructure is there, however it is not being used.

**How many heart attack patients’ lives could be saved?**

Of those admitted to a hospital with an acute infarction, twice as many lives could be saved. If the "Munich Infarction Model" were implemented consistently, there would be about 500 fewer deaths from myocardial infarction in the city each year.

**If you treat heart attacks every day – are you afraid that you will have a heart attack yourself?**

No. I follow the Mediterranean diet which is low in cholesterol. Anyone who has been on vacation in the Mediterranean area knows how good it tastes. I also recommend a glass of red wine in the evening. Prevention does not only mean limitation. Additionally, one should spend an hour jogging, riding a bike, swimming two or three times a week: simple things can lower the risk.

**For decades doctors have been warning people about smoking but the number of smokers remains the same. Is that frustrating?**

Yes. This demonstrates that there are not many possibilities to change behaviour.

**Did you ever smoke?**

Yes. When I was a student, I tried it a few times. But I noticed rather quickly that this was not for me. Luckily, I did not become addicted.

**Many people are anxious about a treatment using catheterisation.**

It is normal to be anxious. Dealing with the heart always entails dealing with emotions. Talking with the patients is very important. The patient should have the feeling of being involved in the treatment; He should be treated as a human being, not as an object. We play music in the catheter laboratory during the procedure and I am sure that helps the patient to relax. Music also helps me relax.

**Do you determine which music should be played?**

It must be relaxing. Otherwise, we can fulfil almost any musical request.