Welcome address
Dr. Joachim Breuer, Deutsche Gesetzliche Unfallversicherung

Dr. Ritz,

Professor Schwab,

Distinguished guests,

As a member of the board of the Hannelore Kohl Stiftung for victims of traumatic brain injuries, I have the honour of welcoming you at the third international medical symposium of the foundation. The focus of this year's symposium lies on the research for patients with traumatic brain injuries. We will look at the insights which we can gather from new findings in pathophysiology and neuroepidemiology – insights which will hopefully lead to improving the lives of those who suffer from the consequences of an injury to the body's most complex organ.

Before we begin, I would like to say a few words about the Hannelore Kohl Stiftung and why we think there is a medical need for further research in the area of traumatic brain injury, especially with regard to therapeutic methods and outcomes. But even before that I want to thank you, Professor Einhaeupl and your colleagues, for having us today. And I would like to express my gratitude to you, Professor Schwab, for your efforts and work without which this symposium would not have been possible.

When we look at the questions and problems which arise in the context of traumatic brain injuries, there is one picture which comes to mind:

the picture of the Gordian knot. I am sure you are familiar with the legend: the knot was kept in a temple at the ancient town of Gordium. It promised imperial power to the man who would manage to untie it. Unfortunately, the knot was so intricately woven that no one ever managed to solve its riddle. Until, of course, Alexander the Great came along and cut it in half.

The subject of our symposium reminds me of this legend because traumatic brain injuries are an issue no less complex than the Gordian knot. First of all, the organ involved is a complex one and central to the functions of the body and the mind. Injuries to this organ pose a challenge to the medical personnel in charge of treatment: not only because of the acute impact of an accident on the brain, but also of the effects which result from the injury:

the malfunctioning of entire organ systems in the rest of the body due to the absence of control signals which would normally be emitted by the now injured parts of the brain.

Second, solving the problems caused by traumatic brain injuries also holds great power. Better treatment of traumatic brain injuries could improve the lives of thousands of people with injuries to their central nervous system. We are not talking about small numbers here: the Hannelore Kohl Stiftung estimates that up to 270,000 people each year injure their brain in an accident.

Unfortunately, we cannot resort to the Alexandrian solution. Our Gordian knot cannot be untied with one swift strike of a sword. The almost unlimited variety of possible brain injuries resists easy solutions. Each injury is as unique as the individual to whom it has happened. And each individual brain has a different potential for recuperation. In some cases, surprising neurological adaptations have happened spontaneously. Furthermore, the treatment of traumatic brain injuries beyond the emergency treatment phase is heavily influenced by what could be called secondary effects or diseases due to brain injury. Some types of organ malfunction in other parts of the body can be more detrimental to the process of healing and rehabilitation than the brain injury itself which caused malfunction in the first place.

This poses great challenges as to the set-up of experimental and clinical studies. It is difficult to plan for many different outcomes or how to translate findings from experimental studies into clinical trials. Moreover, studies must include enormous case numbers in order to produce results which satisfy the requirements of evidence-based medicine.

Taken together, this explains why we do not have a lot of studies with a high degree of evidence or simply put: the studies we have do not really give us a lot of reliable answers as to the questions we have. This has repercussions for real-life treatment in hospitals. We know that patients with traumatic brain injuries receive treatment on a very high level. What we do not sufficiently know, is how effective this treatment is.

This poses a problem for the medical personnel in charge of treatment but also for the institutions which are responsible for rehabilitating the patient after acute care has been completed.

In addition to being a member of the board of the Hannelore Kohl Stiftung, I am also director general of German Social Accident Insurance which is the competent institution for rehabilitating victims of work accidents. As such, we are interested in developing standards of care which enable us to reintegrate our patients into the world of work and into society.

Yet, we need to do so on the basis of methods which have been proven to be effective in order to keep the support and acceptance of those who finance us.

Ladies and gentlemen,

I am well aware that the problems I have presented seem overwhelming. Yet, I am confident that we will manage to untie this knot. As I said, we cannot rely on the Alexandrian solution. We will have to be more detail-oriented. We will need to look for the ends of the thread which forms this knot. And once we have found them, we will have to draw slowly and carefully in order to unravel this problem bit by bit.

This symposium contributes to our endeavor. We will look at new findings which concern changes in the brain while in emergency care. And we will consider the questions arising in the field of neuroepidemiology such as the incidence of neurological diseases, their risk factors and prognoses.

I am confident that this symposium will help to promote the improvement of therapeutic care for the victims of traumatic brain injuries. And I am excited that we will have time today to honor one of the researchers whose work has expanded our understanding of this complex injury with the Hannelore Kohl Research Award.

Thank you for your attention!