JOURNAL

PRIVATE MEDICINE





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Vascular medicine

Finding and eliminating artery constrictions

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Medical help in the age of shoulder injuries

Vienna

Austria

2019





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WIENER PRIVATKLINIK - RIGHT IN VIENNA'S UNIVERSITY HOSPITAL QUARTER



Highest Diagnostic Standards

Our first duty to the patients is to offer them an excellent medical expertise in an atmosphere of safety and comfort. From the first patient's contact with the Wiener Privatklinik, to the aftercare and follow-up, we provide them with high quality, sustainable care.

Well known for its expertise in course, that includes the highest Austria for a number of years, Wiener Privatklinik (WPK) is increas- tion. ingly becoming a first choice for patients coming from abroad. "We are very proud that the international patients have recognized what we represent and that we have gained their trust", says Primarius Walter Ebm. "The patients at WPK are treat-Dr Ebm adds.

How has the expertise of the WPK evolved since its establishment?

tinuously on developing every as- tral European Cancer Center), traupect of the clinic. Our main focus is on patients and providing our patients with the outstanding care which, at the same time, means providing our affiliated physicians with optimal working conditions, the top notch technology and modern, con- range of cancer treatments, from stantly improved hospital management. All of this combined results in therapy and surgery. We are in the quality on the highest level.

Our clinic has 145 clinical beds, four state-of-the-art theatres, advanced radiology centre and more than 300 remarkable doctors. Our PET scans, MRI, biopsy tests etc. proximity to the Vienna University Hospital and the intensive cooperation with their top-level researchers and clinicians, contribute to the fact that patients at WPK are treated with the best and latest methods.

tance of our patients' well-being and are dedicated to offer them an environment which is not only luxurious, but also creates the atmosphere of safety and comfort, thus contributing to patient healing process. Of the growing patient's requests, help

degree of confidentially and discre-

From the first patient's contact with WPK, to the aftercare and follow-up, we provide them with high quality, sustainable care.

What are the leading medical services are you offering today?

First duty to the patients is to offer ed with the best and latest methods", them an excellent medical expertise in an atmosphere of safety and comfort. WPK is renowned for its successes in the fields of internal medi-Ebm: We at WPK are working concine, oncology (WPK Academy Cenma surgery, sports surgery and orthopaedics, cardiovascular diseases. gastroenterology, general surgery and general diagnostic.

> For an example, at our Academy Cancer Centre we offer a whole chemo therapy to the latest immune process of building the modern state-of-the-art radio therapy centre. Of course, we are also offering the best diagnostics, including lab tests,

What international patients can expect from you? Our distinctive features are a combi-

nation of the latest treatments combined and the highest diagnostic standards, plus the top notch medi-We are also aware of the impor- cal devices, techniques and physicians with the highest international reputation. But I would like also to point out that our marketing and international department, which is constantly growing in response to

patients with arranging appointments, issuing cost estimates, assistance with visa invitations, organizing ambulance transport, etc. We provide all these services in different languages besides German, such as English, Russian, and Romanian.

It seems that you have strong international connections and lot of international patients.

We are very proud that the international patients have recognized what we represent and that we have gained their trust. The number of international patients is growing and we are becoming increasingly known for our services internationally. We are very happy and pleased to be able to offer our patients the best possible service and care.

We also visit and stage events in different countries such as Romania, Russia and others, replying to public and media's questions about WPK, but also offering second opinions, or answering patient's questions.

During the selected exhibitions we attend, mostly in Russia and Ukraine, we publicly present our clinic, as well as present ourselves to potential cooperation partners, all with the view of building stronger connections abroad.

We are also very proud to say that we have a WPK Office in Bucharest and Timisoara, as a result of the increased interest from patients in Romania, where patients can visit us directly during our working hours, or contact us over an e-mail or phone, and have their questions regarding appointments, cost estimations and



Prim. Dr. Walter Ebm Privatklinik Holding

INFORMATION

To book an appointment all you need to do is to send an e-mail at info@wpk.at, or to call us on +43 140 180 8700. Our international marketing department will answer any questions you might have.

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Incredible advances in nerve surgery

Prof. Dr. Robert Schmidhammer, Head of the Millesi Center for Nerve Surgery, Hand Surgery and Reconstructive Surgery at the Wiener Privatklinik.

Univ. Prof. Dr. Robert Schmidhammer.

Following the death of Prof. Dr. Hanno Millesi, how will the Millesi Center at Wiener Privatklinik continue?

Schmidhammer: Nothing will change for the patients. Prof. Millesi already transferred the entire operational side of the business to me many years ago and I am continuing it the way he had envisioned. Yet we did lose a person who was extremely important to me personally. Prof. Millesi and I founded the Millesi Center together and had been working together closely since 2004.

We jointly attended international conferences and organised an international symposium on nerves here in Vienna every two years. I am continuing on with this tradition. In March 2018, a conference of the German Nerve Club and the 7th Plexus Meeting held in German will take place for the first time in Vienna.

How has the Millesi Center developed in recent years?

The number of surgeries has doubled since 2013. In addition to general hand surgery and function-improving surgeries, we are focusing on nerve injuries due to obstetric trauma. In many cases, these children first need nerve reconstruction and then functional muscle-tendon transfers. Clinical research is also still carried out at the Millesi Center.

What can you tell us about this research? Prof. Millesi was, after

all, a pioneer in the field of peripheral nerve surgery.

Yes, we have developed a surgical method for a section of the peripheral nerve sector leading to complete paralysis of the arm, such as, for example, a procedure in which the respiratory nerve is used to activate elbow flexion without the patient losing the respiratory nerve. Thus one nerve and two functions. A nerve transplant is connected end-to-side to the respiratory nerve, the

tions simultaneously, because the brain region for elbow flexion is naturally located elsewhere than the region for diaphragm movement. *How is this possible?*We are investigating this with functional MRI scans to understand the neurological level. Current studies

phrenic nerve, and then connected

end-to-end to the nerve for elbow

flexion. It is incredible that one

nerve performs two different func-

in cooperation with the Medical
 University of Vienna - have shown that special brain regions, such as the hand region in peripheral paralysis, can assume dominance over another brain region. This helped us explain why a nerve can perform two different functions.

Doesn't this affect diaphragm movement?

The only thing that can be seen one year to a year and a half after surgery are respiratory-synchronous EMG signals in the biceps, without any respiratory-synchronous movement occurring. After that, these respiratory-synchronous discharges can no longer be detected.

Such nerve transplants have been possible for a long time now. What's new in the field of peripheral nerve surgery?

Such nerve transfers can now be carried out on a large scale. Redundant fascicles are removed from local, functional peripheral nerves, i.e. parts of those nerves are extracted that perform a function that is also performed by other parts of the nerve. In the ulnar nerve, for example, there are several fascicles that are responsible for hand joint flexion, so we can remove it and redirect it in such a way that it takes on the function of another

nerve

Where else can this method be used? What's completely new is that this method can also be used in patients with spinal cord injuries, who have paralysis of the hand and elbow but still have innervated shoulder muscles. Then it is possible to displace nerve fibres and generate additional ones, such as an elbow extension, which is very important for patients in wheelchairs because they can then open doors on their own.

This is great progress - how can it be classified?

Not everything can be achieved, but with such nerve operations – and also with muscle-tendon transfers and their combination – the functionality can be improved not only for injuries but also for spasticity or malformations of the hand or the upper limb.

Ultimately, it is not about academic achievement but about what benefits the patient. That was always Prof. Millesi's firmly held belief. And that is what I am trying to continue and build on.



The Millesi Center focuses on general hand surgery, functionimproving surgeries and obstetric nerve injuries.



"It is not about academic achievement but about what benefits the patient."

Prof. Dr. Robert Schmidhammer, Head of the Millesi Center for Nerve Surgery, Hand Surgery and Reconstructive Surgery at the WPK





IN BRIEF

Number of surgeries doubled since 2013Millesi Center

■ Latest methodologies
■ Number of surgeries

continues with What can you founder's mission research? Pro

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Breast cancer: Good chances of being cured in early stage

State-of-the-art diagnosis, treatment and follow-up care of breast cancer: Breast cancer patients are in good hands at the Wiener Privatklinik.

Breast cancer is omnipresent. Nearly one in every eight women will be diagnosed with breast cancer during her lifetime, and almost everyone knows someone who has been affected by the disease. The danger of breast cancer does not stem

from the actual tumour in the breast - which can usually be easily removed surgically - but from the metastases: cancer cells migrate from the breast to other parts of the body - such as the liver, lungs or bones - where they metastasize.

Breast cancer patients are in good hands at the Wiener Privatklinik (WPK). It has a number of outstanding physicians who enable state-ofthe-art comprehensive diagnosis, treatment and follow-up care of breast cancer. "The interdisciplinary cooperation of specialists from different fields such as radiology, pathology, surgery, internal oncology and radiotherapy is decisive", said Prof. Dr. Christoph Zielinski, coordinator of the WPK Academy Central European Cancer Center.

Surgery in cancer treatment

There are three main pillars of treatment in breast cancer: surgery, internal oncology and radiotherapy. "Surgery is almost always the treatment option", said Associate Professor Dr. Emanuel Sporn. This also applies to patients whose tumours have already led to metastases in other areas of the body and whose lives can no longer be prolonged

preventing localised issues, such as tumour that has spread into the skin or the chest", said the doctor, who left the University Clinic for Surgery at the Medical University of Vienna in March of this year to dedicate his time exclusively to private patients. If breast cancer is suspected, the

with surgery. "Then it is a matter of

suspicious lesion is removed during surgery and a pathologist performs a microscopic examination during surgery. If breast cancer is actually present, the carcinoma is surgically removed completely while under anaesthesia, leaving a safety distance, as are the lymph nodes in the armpit to which the cancer may have spread. In most cases, the sentinel lymph node is removed first. Only if it is affected will additional lymph nodes be removed.

Breast preservation

The number one priority in breast cancer surgery, apart from completely removing the tumour, is to preserve the breast. "For most breast cancer patients, the integrity

tients can undergo breast-conserving surgery. This means that the skin of the breast and the nipple remain intact. "Most patients will only have a scar on the outside in the form of a line", said the surgeon. If a lot of tissue has to be removed from the breast, breast reconstruction can take place during surgery – in cooperation with a specialised plastic surgeon – or at least started.

Oncology treatment

Early-stage breast cancer is very

of the female body is of great importance", said Associate Professor Sporn. About 90 percent of the pa-

Early-stage breast cancer is very treatable. "If breast cancer is detected at an early stage and treated surgically, we have five-year survival rates of 90 to 95 percent", said Associate Professor Sporn. The complication rates are very low; even patients who have had lymph nodes removed can be discharged to home care after one or two days.

Some of the patients are already undergoing chemotherapy, hormonal therapy or immunotherapy before surgery. "The aim is to reduce the size of the tumour", said Prof. Zielinski. Very often, the tumour becomes so small – or disappears all

In the right breast is a tumour highly relevant to metabolism and thus "luminal". The smaller lumps are lymph nodes in the armpit to which the cancer has spread.

together - so that those tumours can be operated on in a way that preserves the breasts; without this prep, the entire breast would have had to have been removed.

pendent, the patient is also pre-treated with antihormonal therapy. In about 15 percent of all breast cancer patients, the tumour growth is subject to the growth factor HER2/neu.



"For most breast cancer patients, the integrity of the female body is of great importance."

Assistant Professor Dr. Emanuel Sporn

This so-called neoadjuvant therapy is usually one of eight chemotherapy cycles. If the tumour is hormone deThese patients are treated with a special antibody that blocks HER2/neu. "All these treatment options are



Treatment is preceded by diagnostics: The Radiology Center offers all diagnostic imaging tests.

IN BRIEF

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- One in eight women has breast cancer
- Surgery is always the treatment option
- All modern oncological treatments

y of Getty Images – Eraxion; Günter Mer

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"The interdisciplinary cooperation from different fields such as radiology, pathology, surgery, internal oncology and radiotherapy is crucial."

University Professor Dr. Dr. h.c. Christoph Zielinski

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based on the assumption that any metastases have the same properties as the primary tumour", said Prof. Zielinski. "These treatments then also have an effect on the tumour cells that have settled elsewhere in the body."

Survival rate doubled

"If the tumour has already metastasized, we are no longer able to save the patient's life, yet we can

Assistant Professor Dr. Johannes Sailer

prolong it while maintaining the

highest quality of life possible", said

Prof. Zielinski. There are a number

of options, particularly when it

comes to drugs that treat hormone-

more new drugs are helping to improve this situation."

Radiotherapy

"The Radiology Center also welcomes patients who had a

done by a statutory health insurance radiologist."

cancer screening with an abnormal finding (BIRADS 3, 4 or 0)

Another important pillar in the treatment of breast cancer is radiation therapy. If breast cancer has been operated on, patients should receive radiation after surgery as this greatly reduces the risk of recurrence of the cancer in the breast. Thanks to postoperative radiation,

tional special images are first taken, followed by a high-resolution breast ultrasound examination. If suspicious areas are found – but also if the breast tissue is very dense or the patient has breast implants – magnetic resonance imaging (MRI) is performed.

Then a biopsy is performed: A sample is taken from the suspicious area of the breast under some form of guidance such as ultrasound, MRI or mammography and then examined in a lab. "This is an outpatient procedure under local anaesthesia and takes about half an hour", said Associate Professor Dr. Johannes Sailer, one of the radiologists at the Radiology Center.

This gives us the chance to determine the degree of spread of a cancer using a combination of positron emission tomography and computer tomography (PET/CT) or using conventional computer tomography (CT) of the chest and abdomen (tumour staging). Furthermore, the sentinel lymph node can be marked prior to breast surgery.

State-of-the-art diagnostics
Treatment is of course always pre-

their breast completely removed.

patients who underwent breast sur-

gery have had the same good onco-

logical results as patients who had

ceded by diagnostics. The Radiology Center located at the WPK offers all diagnostic imaging tests at one location, which is needed to diagnose breast cancer: If breast cancer is suspected, a mammography or addi-

Early detection

Early detection with a screening mammography is also possible at the Radiology Center. "Although we

receptor-positive cancers. Great progress has been made in this field in recent years: "A few years ago, patients died an average of six to nine months after being diagnosed with metastatic breast cancer. Patients now have a life expectancy of five years on average, and more and

mammography:

The Radiology Center offers

short waiting

comprehensive

times and

service.



"If there is a family history of breast cancer, then genetic counselling is a good idea."

Dr. Anne Catharina Dressler

are not part of the breast cancer early detection programme of the Austrian health insurance companies, we offer patients with private health insurance the same high quality, considerably shorter waiting times and a comprehensive service", said Dr. Johannes Sailer. If a suspicious lesion is discovered during cancer screening, further diagnostic measures such as an MRI or biopsy are immediately initiated. And if the suspicion is confirmed, the Radiology Center immediately puts you in touch with the outstanding surgeons and oncologists at the Wiener Privatklinik.

"The Radiology Center also welcomes patients who had a cancer screening with an abnormal finding (BIRADS 3, 4 or 0) done by a statutory health insurance radiologist and now wish to get a second opinion", said Dr. Sailer.

Genetic predisposition

About ten percent of breast cancer cases are due to a genetic predisposition. One in every 20 breast cancer patients has a mutation of the genes BRCA1 and BRCA2. Women with this genetic characteristic have an 80–85 percent risk of developing breast cancer during their life. In addition, there is a 50–55 percent lifelong risk of developing ovarian cancer.

"If there is a family history of breast cancer, then genetic counselling is a good idea", said Dr. Anne Catharina Dressler, a specialist in gynaecology, obstetrics and breast health. In the context of a genetic consultation, the patient's medical background is discussed, including how much sense it makes to do genetic testing."

If there is a genetic predisposition, there are possibilities to prevent breast cancer. One option is to intensify early cancer detection, i.e. doing an annual MRI exam after the age of 25 and an additional annual mammography after the age of 35.

"Another prevention possibility is to have prophylactic surgery done to remove

the age of 25 and an additional annual mammography after the age of 35. "Another prevention possibility is to have prophylactic surgery done to remove the ovaries after family planning has been completed", explained Dr. Dressler. This not only reduces the risk of ovarian cancer but also the risk of developing breast cancer.

The third option is the preventive removal of the mammary gland, which is often incorrectly referred to as a "mastectomy". "In truth, only the mammary gland is removed, while the nipple and skin can usually be preserved", said the specialist. In the course of removing the mammary gland, the surgeon can immediately start with breast reconstruction using silicone implants or the patient's own tissue.

The self-examination of the breast is part of the preventive care that every woman can do herself.

BREAST CANCER

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From suspicion to follow-up care

Tumours of the female genitalia can be largely removed with minimally invasive surgery. The Wiener Privatklinik has of course set up a tumour board.

> Cancer is a disease that can affect all parts of the human body including the female reproductive organs. At the Wiener Privatklinik (WPK) all the following cancers can be treated. That is what the out

Schurz. "Thanks to intensive preventive measures, however, the disease rate has been reduced by 75 percent in recent years."

oping cervical cancer is an infection

The most common cause for devel-

"Thanks to intensive preventive measures, however, the risk of cervical or uterine cancer has been reduced by 75 percent in recent years."

iversity Professor Dr. Brigitte Schurz

standing gynaecologists at the WPK stand for.

The most widely known tumour of the female genital tract is cervical or uterine cancer. "Years ago, this was the most common malignant tumour in the genital area", said Dr. Brigitte

with certain types of the human papillomavirus (HPV), which is usually transmitted sexually. A vaccine to prevent HPV that causes cervical cancer and its precursors has been available for some years now. Fortunately, this vaccination and screen-

ings using PAP smears have led to a decline in new cancer cases. We can already treat cancer precursors locally with a special ointment.

Uterine & ovarian cancer

Uterine cancer is a malignant tumour that begins in the uterus. It mainly affects women in and after menopause, with childlessness, high blood pressure and obesity being risk factors. The first symptom is often bleeding. "Any bleeding after menopause should be checked by a doctor as soon as possible", said Prof. Schurz. When diagnosed and treated early, there is a very good chance of being cured.

Ovarian cancer is particularly dangerous. An early detection is only possible with vaginal ultrasound because the patient can hardly feel

vaginal ultrasound exam of the ovaries should always be done during each gynaecological examination", Prof. Schurz said. Even if there is a family history of ovarian cancer, we advise exercising caution. "It's best to have a genetic test carried out in a special lab." The gynaecologist recommends "discussing a prophylactic ovary removal if the test results come back positive."

early symptoms. "For this reason, a

Endoscopic techniques

Carcinomas can even develop in the labia. Vaginal cancer mainly affects older women above 60, with risk factors also including childlessness, high blood pressure and obe-

"60 to 70 percent of these diseases can be successfully treated surgically", Univ. Prof. Dr. h.c. Heinz Kölbl explained. "In more widespread cancers, chemotherapy or a combination of chemotherapy and radiation therapy is necessary, which may be followed by a surgery." Minimally invasive endoscopic techniques are most frequently used, but classical open surgery still exist, too.

New at WPK: the tumour board

Interdisciplinarity is the key to modern cancer treatment. That is why we have a so-called tumour board at the Wiener Privatklinik. It can be seen as a regular meeting of specialists from different disciplines who determine the best treatment for each individual patient together. "With the establishment of a tumour board, we are aligned with international developments, highlighting the high quality of the treatment offered at the WPK", said Prof. Kölbl.

The tumour board does not only address medical questions but is al-



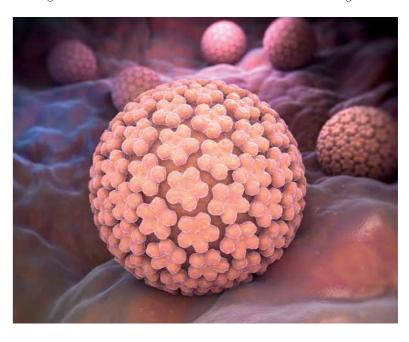
"With the establishment of a tumour board, we are aligned with international developments, highlighting the high quality of the treatment offered at the WPK." University Professor Dr. Dr. h.c. Heinz Kölbl

ways at the patient's side. "Patients want a doctor who is a case manager and will be by their side through the course of treatment, from the first suspicion of cancer to the follow-up care after an oncological treatment. They want to be able to turn to the doctor with questions or simply when they are unwell", explained Visiting Assistant Professor Dr. Dan-

important one in oncological rehabilitation because it has a positive effect on the healing process and is a great resource", said Prof. Dörfler.

Sexuality

To this end, both physical therapy and medical devices such as dilators are available as options. When it comes to a shortened vagina after



Human papillomavirus (HPV) can cause cervical cancer.

iela Dörfler. "All of that is possible in a clinic like the WPK."

The gynaecologist and clinical sexologist is also a specialist for the consequences and side effects cancer has on sexuality. A genital tumour i.e. its treatment can lead to a low sex drive, vaginal dryness, early onset of menopause or a shortened vagina. "The issue of sexuality is an

certain operations or after radiation, patients are afraid that they will no longer be able to have intercourse. Yet Prof. Dörfler knows how to reassure them: "Depending on previous treatment, penetration is possible after six weeks to three months, if they wish. Having a loving partner by one's side is a great support in the healing process."

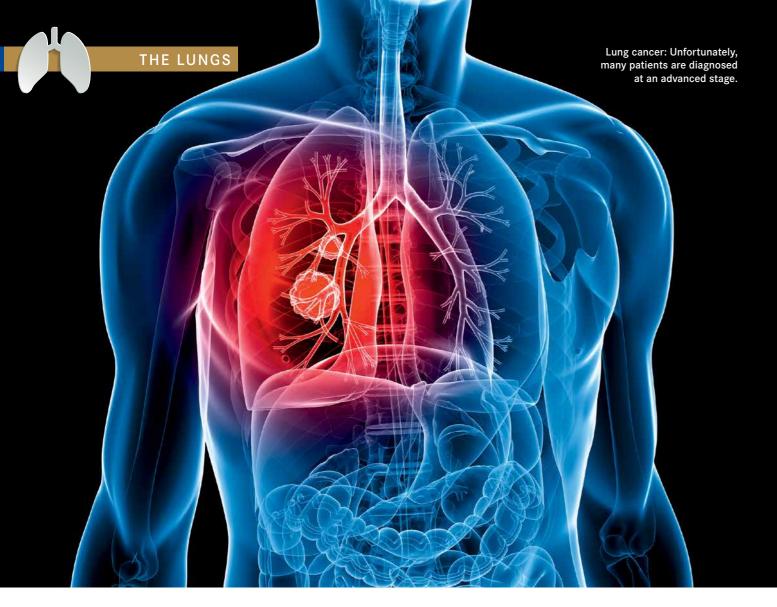
IN BRIEF

- Tumours of the female genitalia
- Sexuality is an important issue
- A tumour board was set up at the WPK

"The issue of sexuality is an important one in oncological rehabilitation because it has a positive effect on the healing process and is a great resource." iting Assistant Professor Dr. Daniela Dörfler

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Unique total patient care

The Wiener Privatklinik offers all available surgical and oncological treatment options as well as comprehensive diagnostics to patients with lung cancer.

"When treating lung cancer, optimal interdisciplinary cooperation is key", said the internationally renowned oncologist Univ. Prof. Dr. Dr. h.c. Christoph Zielinski. The WPK Academy Central European Cancer Center, in which Prof. Zielinski plays

a leading role, is an outstanding example. First-class Austrian physicians from many different fields work together to help patients with lung cancer – and of course other types of tumours – get the best possible treatment.

"The WPK Academy Central European Cancer Center offers lung can-

cer patients total medical care, which is unique to the private sector", explains Prof. Zielinski.

Comprehensive diagnostics

The first step is radiological diagnostics, in which the combination of positron emission tomography and computed tomography (PET/CT) plays a decisive role. For diagnosed lung cancer, an endobronchial ultrasound guided biopsy (EBUS) and molecular diagnostics – in an external lab – is conducted in which specific changes in the tumour tissue are searched for and an exact tumour typing is carried out.

Based on these examinations, the interdisciplinary tumour board de-

cides on the further course of action, i.e. which surgical, radiotherapeutic and oncological measures should to be taken to combat the lung tumour.

Surgery is the first choice

"The question that matters most is whether surgery should or shouldn't be performed", Prof. Zielinski explained. Surgery is still the best option, if possible. "If you can remove a tumour as a whole, then you should do so", said the oncologist.

"Surgical treatment plays an important role, especially in the early stages", Prof. Dr. Walter Klepetko, a renowned specialist in bronchial carcinoma surgery, explained. "The treatment of choice for early-stage

resection of the primary tumour including the systematic removal of the lymph nodes involved. "Minimally invasive surgery has increasingly established itself as the standard procedure for early cancer stages in recent years", the head of the Clinical Department of Thoracic Surgery at the Medical University of Vienna went on to say. "Unfortunately, however, many of the affected patients are already at an advanced stage at the time of diagnosis.

Whether a tumour is operable or

lung cancer is the surgical radical

Whether a tumour is operable or not depends on how far it has spread and if other body parts are involved.



"When treating lung cancer, optimal interdisciplinary cooperation is key."

University Professor Dr. Dr. h.c. Christoph Zielinski

therapy that precedes the surgery in order to contain the disease and make it as operable as possible. Chemotherapy is also used in postoperative treatment because tumours have the ability to spread. This means that individual tumour cells can migrate from the tumour to other parts of the body, form new cells and metasta-

lung cancer cases, we are now able to attack specific targets in the cancer cell", Prof. Zielinski explained. Molecular diagnostics is used to identify suitable tumours. "In these cases, targeted therapy, which consists of the patient taking one tablet daily, delivers better results than chemotherapy", the oncologist



"Minimally invasive surgery has increasingly established itself as the standard procedure for early cancer stages in recent years."

University Professor Dr. Walter Klepetko

If cancer has spread to the lymph nodes on the opposite side or if distant metastases are already present in the liver or brain, surgery is not advisable.

Chemotherapy

If a tumour is not immediately operable, a neoadjuvant chemotherapy is often carried out first, i.e. a chemosize. "Adjuvant chemotherapy can help to prevent the cancer from returning", Prof. Zielinski explained. There are currently no alternatives to chemotherapy after an operation.

Targeted treatment

If a tumour is inoperable, molecular targeted therapy is used where possible. "In about 25 percent of

Immunotherapy

Another option for inoperable tumours is immunotherapy. This involves the use of antibodies that block those mechanisms that tumours use to suppress the immune system functions. Depending on the immunohistochemical properties of the tumour, this can be done alone or in combination with chemotherapy.

"Great progress has been made in recent years in the oncological treatment of lung cancer and other tumours", Prof. Zielinski said. "Patients of the WPK Academy Central European Cancer Center can benefit from this."

Treatment starts with radiological diagnostics.



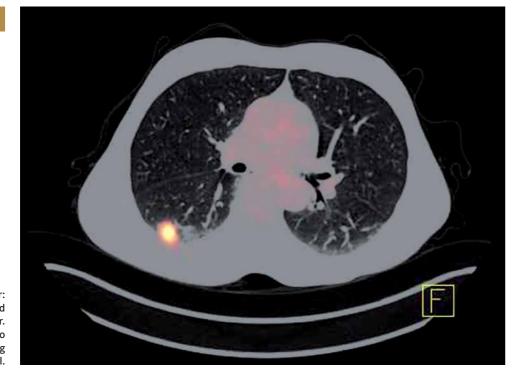
IN BRIEF

- Interdisciplinary collaboration
- Highest level of surgical care
- State-of-the-art oncological treatment

Photos courtesy of Getty Images – Kumer; Getty Images –

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Early-stage lung cancer: The PET/CT scan shows increased glucose metabolism of the tumour. Lymph nodes are not yet affected, so the patient has a good chance of being cured with surgical removal.

Early cancer detection

With a computer tomographic examination of the lung, lung cancer can be detected at an early stage in heavy smokers, thus significantly increasing the chances that it can be treated.

> "We have known for decades that smokers have the highest risk of developing lung cancer", said Assistant Professor Dr. Martha Hoffmann from the Radiology Center at the Wiener Privatklinik (WPK). The risk is all the higher the more and the longer the affected person smokes.

> The National Lung Screening Trial (NLST), a US study, has shown that long-term smokers who regularly undergo low-dose computer tomography (CT) have a significantly better survival rate. "If lung cancer is detected at an early stage, mortality can be reduced by up to 20 percent", said Hoffmann, summarising the findings of the study. A tumour in the lung that is still small and restricted to a single site has better prospects than a tumour that has already developed into distant metastases and affected the lymph nodes.

CT scan provides more detail than chest X-ray

30 pack years

With a 30 or more pack-year smoking history, which is the number of cigarette packs consumed daily multiplied by the number of years and computer tomography - Dr.

smoked, the NLST study recom- Hoffmann is the expert for this at mends screening for lung cancer the Radiology Center at the WPK. with low-dose CT. "That should be PET-CT can be used to make glucose



"If lung cancer is detected at an early stage, the mortality rate can be reduced by up to 20 percent."

ssistant Professor Dr. Martha Hoffmann

worth it to smokers, who are already spending so much money on cigarettes", Dr. Hoffmann said. CT images provide greater clarity and more details than conventional chest X-rays. "A chest X-ray only shows a tumour when it is very large", said

If a suspicious lesion is found in the CT, precise criteria let us know whether the exam should be carried out again after a certain period of time or whether the source needs to be examined more closely. This is followed by PET-CT, the combination of positron emission tomography

metabolism visible in the tissue - as tumours have an increased glucose metabolism.

Observe non-smoker protection

The best way to prevent lung cancer is not to smoke. Those who can still not stop smoking should at least be considerate of their fellow human beings. "A study has shown that the probability of getting lung cancer doubled for waitresses after eight years of working in a smoking establishment", said Dr. Hoffmann. Protecting non-smokers is therefore of particular importance to her.

The WPK in "Little Vienna"

The Wiener Privatklinik opened its second branch office abroad in Timisoara in Romania.

Timisoara is Romania's third-largest city. It once belonged to Austria-Hungary and is sometimes referred to as "Little Vienna" on account of its numerous beautiful and stately buildings erected during that period. It is in this historical location in Romania that the Wiener Privatklinik (WPK) opened its second branch office abroad.

Only a five-hour drive to Vienna

Patients coming from western Romania are able to receive information on diagnosis and treatment options at the WPK. "Timisoara is only five hours from Vienna by car", said Ema Hafner, EMBA, head of marketing and international business at the WPK. "That is a promising catchment area for us."

A large number of patients coming to the WPK from abroad are from Romania.



That is why the WPK already set up a branch office in Bucharest and builds on other activities in the country.

"The top physicians working at the WPK are in constant communication with the doctors in Romania", Hafner said. At the beginning of March, Prof. Dr. Christoph Zielinski, head of the WPK Academy Central European Cancer Center, gave a lecture at a large conference for advanced training for around 300 Romanian oncologists. The main topic of discussion were the latest developments in the field of immunotherapy - the latest form of cancer treatment that uses the body's natural defences to fight cancer cells.

Ten days later, a delegation of Romanian doctors visited the Wiener Privatklinik to get an idea of the latest cancer treatment possibilities that the WPK Academy Central European Cancer Center offers.



ACUTE CARE AROUND THE CLOCK: +43 1 401 80-5555

A valuable number

In addition to the "Emergency Card" that we introduced for our regular patients some years ago, Wiener Privatklinik (WPK) now also offers on-call specialists around the clock in the field of emergency surgery/orthopaedics. When it really hurts, prompt assistance really matters!

The process

- ➤ You injure yourself and require prompt assistance.
- ➤ You call +43 1 401 80-5555, briefly describe your problem, and are immediately connected to one of our general practitioner with emergency medicine certification.
- ➤ Together you discuss the next steps, and if you decide to seek care at WPK, he also conducts the preliminary assessment. During this assessment he determines whether additional specialists should be called in and whether immediate treatment at WPK can take place.
- ➤ If necessary, specialist consultation or treatment is possible upon very short notice.

➤ If imaging is required to diagnose your issue, this can be obtained around the clock (Xrav, CT, MRI).

Your benefits

- ➤ Quick preliminary assessment and first aid.
- ➤ Competent and rapid assistance through specialists if required.
- ➤ As a private patient, you will appreciate the pleasant atmosphere of WPK.
- ➤ Priority in-patient admission should this be necessary.
- ➤ Thanks to our excellent equipment, all diagnostics can be carried out at WPK (for instance, WPK is the only private clinic with a PET-CT – and will soon also offer radiation therapy!).



IN BRIEF

Lung cancer screening beneficial

Best not to smoke at all



When it comes to men's health, prostate cancer comes to mind first. In fact, prostate cancer is the most common type of tumour found in men in industrialised countries. Nearly 5,000 men are diagnosed

"We recommend that all men aged 45 and up undergo a

"We recommend that all men aged 45 and up undergo a regular screening at least once a year, whereby risk patients and prostate cancer patients should do so more frequently", said University Professor Dr.

ropean guidelines are now recommending genetic testing.

"Before a biopsy is performed, genetic tests can be carried out," said Dr. Bernd Bursa, specialist in urology and andrology and founder of the Uro-Zentrum in Perchtoldsdorf, a centre for urology and andrology. This procedure is not covered by health insurances in Austria, however, as Bursa regretfully points out. An MRI of the prostate, on the other hand, which was considered experimental two years ago, is now paid for by health insurance companies.

regular screening at least once a year, whereby risk patients and prostate cancer patients should do so more frequently."

University Professor Dr. Georg Schatzl

with prostate cancer in Austria each vear.

A number of first-class urologists work at the Wiener Privatklinik (WPK) and offer all available treatment options – from surgical removal of the entire prostate to active surveillance, which – depending on how aggressive the tumour is – is becoming increasingly more common.

Annual preventive care

Given the frequency of prostate cancer, prevention plays a very important role in lowering the risk.

Georg Schatzl and long-term urologist at the WPK.

Taking a blood sample, determining the so-called PSA value ("prostate specific antigen") and a biopsy make up the classical examination methods. Recently, other options have arisen: The corresponding Eu-

Great level of suffering

In addition to the prominent issue that is prostate cancer, a second, even more frequent condition is often forgotten: the benign enlarge-



"With increasing age, the prostate can swell beyond normal size and thus sometimes cause a great deal of suffering."

Bladder cancer diagnosis and treatment

The Wiener Privatklinik (WPK) uses a complex standard method for diagnosing and treating bladder cancer: Blue light fluorescence cystoscopy is used in patients who require a urinary bladder biopsy of the mucosa due to a suspected tumour as well as in patients who have a bladder tumour resection performed. A substance (5-aminolevulinic acid) is applied to the bladder using a catheter. This substance is



The symptoms of bladder cancer remain undetected for a long time. The median age of onset is 73.

absorbed and stored by the tumour cells. It begins to fluoresce when exposed to blue light, helping surgeons more accurately localise and completely resect smaller and larger tumours. "This significantly increases the accuracy, as the risk of overlooking a suspicious spot is of course minimised", said University Professor DDr. Christian Kratzik, one of the users of the blue light system at the WPK.

ment of the prostate gland. "With increasing age, the prostate can swell beyond normal size and thus sometimes cause a great deal of suffering," Dr. Bursa stated. Nocturnal urination, the urgent need to urinate and weak urine flow count

tence. However, erectile dysfunction can have many causes. "In the past, we assumed that erectile dysfunction was primarily caused by psychological issues, but today we know the cause to be organic", said Prof. Schatzl.

Once the condition has been determined – for which the penis vessels are examined with a special ultrasound method – a range of drugs is available to treat erectile dysfunction. In some cases, surgery can also be helpful.

among the unpleasant symptoms. A benign enlargement of the prostate can also lead to an infection associated with severe fever.

Fortunately, there are a number of treatment options involving drugs. It is also possible to surgically remove the tissue in the prostate that presses against the bladder or interferes with urination (bipolar transurethral resection). Dr. Bursa goes on to explain that "this procedure protects the nerves and thus the continence, this is the ability to hold back the urine for a while."

A number of causes

One of the possible symptoms of benign prostate enlargement is erectile dysfunction, more commonly known as impo-

A drop in hormone levels

A possible cause of erectile dysfunction is a testosterone deficiency. With increasing age, the level of the male sex hormone gradually decreases. "40 to 60 percent of 60year-old men suffer from a testosterone deficiency", said Prof. Schatzl. Symptoms may include a low sex drive and overall fatigue. Testosterone deficiency is treatable with hormone replacement therapy.

Prostate problems and erectile dysfunction are naturally typical diseases found in men.

sy of Getty Images – Wildpixel & Dr_N

IN BRIEF

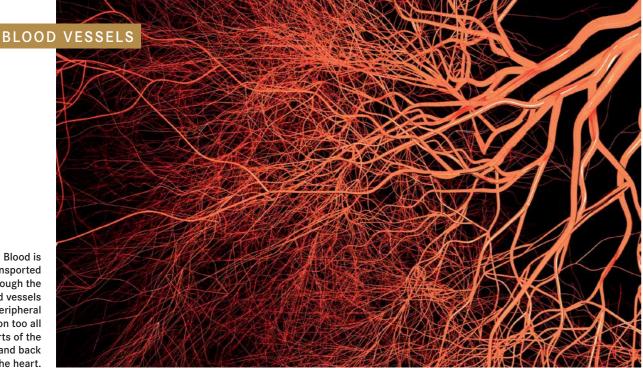
Prostate: cancer and

benign enlargement

Erectile dysfunction

Testosterone deficiency





Blood is transported through the blood vessels via peripheral circulation too all parts of the body and back to the heart.

Finding and eliminating artery constrictions

Vascular blockages caused by atherosclerosis are treated by first-class specialists in interdisciplinary care programmes at the Wiener Privatklinik.

> "Vascular calcification is the most common disease worldwide. Atherosclerosis is still responsible for almost half of all deaths", said Prof. Dr. Dr. h.c. Ihor Huk, vascular surgeon and head of the Surgical Department at the Wiener Privatklinik (WPK).

causes a stroke, a narrowing of a renal artery can lead to hypertension or kidney failure.

Vascular board

In modern vascular medicine, vascular surgeons, angiologists and interventional radiologists work

cular board in which the various physicians work out the optimal treatment for patients with severe circulatory disorders together.

Moreover, the Vascular Competence Center is currently being set up at the WPK in which each speciality will work closely together in the future. "This centre will also focus on prevention, this is on metabolic disorders that precede vascular diseases", said Prof. Huk. Eliminating these risk factors is of central importance for the prevention of vascular diseases.



'Vascular calcification is the most common disease worldwide. Atherosclerosis is still responsible for almost half of all deaths."

University Professor Dr. Dr. h.c. Ihor Huk, head vascular surgeon of the Surgical Departmen

Atherosclerosis leads to a narrowing or blocking of blood vessels. There are different consequences depending on which arteries are affected. The most common disease of this type is peripheral artery occlusive disease (PAOD), which is caused by a blockage or narrowing of one or more arteries in the legs. A blockage of a coronary vessel causes a heart attack, a constriction of the artery

supplying the brain (carotid artery)

alongside each other. "Vascular patients are cared for by an interdisciplinary team", said Prof. Huk. The WPK therefore has a so-called vas-

Best medical treatment

Even when treating existing vascular diseases, the first step is to "optimise the risk factor profile", as Prof.



"When treating existing vascular diseases, the first step is to 'optimise the risk factor profile'."

University Professor Dr. Erich Minar

Dr. Erich Minar, one of the world's leading vascular physicians, puts it. The best possible medical care includes drugs such as blood thinners, cholesterol reducers, even blood sugar or blood pressure regulating drugs and lifestyle changes: no more smoking, lots of exercise and a healthy diet.

Stents

There are basically two methods to open the blocked arteries: either endovascular treatment with a balloon-tipped catheter and stent or vascular treatment with a bypass surgery or an atherectomy. Which therapy is ultimately used is decided by the vascular board in an interdisciplinary conversation. Smaller and shorter blockages are more likely to be removed with minimally invasive endovascular procedures, whereas larger and longer blockages more than likely require surgery.

In the case of endovascular treatment, a catheter is first passed through the bloodstream to the target area and an angiogram, i.e. a vascular X-ray imaging using a contrast agent, is performed. Once the blockage has been identified, a wire is fed to the site of the blockage where the balloon is inflated to stretch the narrowed area, and a stent is inserted, which is a metal mesh tube that holds the vessel open. "With these minimally invasive procedures, the risk of complications is now negligible", said the highly regarded vascular specialist University Professor Dr. Martin Schillinger. "The chances of success are very high, even with long blockages of up to 30 centimetres."

Great progress

Great strides have been made in the field of endovascular treatment in recent years. "Due to miniaturisation and the associated reduction of risk, the complication rate for coronary artery procedures is de facto negligible", said Prof. Schillinger,

> Endovascular treatment: a catheter is inserted into the blood stream.



A stent is a metal mesh tube used to keep an expanded vessel open.



"Due to miniaturisation and the associated reduction of risk, the complication rate for coronary artery procedures is de facto negligible."

University Professor PD Dr. Martin Schillinger

confirming the statement. "We are now able to penetrate into smaller vessels more smoothly without causing any damage."

New drug-eluting stents have also been very beneficial to patients. During the period in which the stent heals, it releases drugs, ensuring that a new inner vessel wall is formed over the stent. "20 years ago, vessels would narrow again in 30 to 40 percent of all cases after stenting.



IN BRIEF

■ Treatment of vascular blockages

Balloon catheter and stent

Bypass and atherectomy





"Most patients can go home the day of the endovascular procedure."

University Professor Dr. Christoph W. Kopp

Today, the re-narrowing rate of a coronary artery (restenosis) is below two percent in the long term", said Prof. Schillinger.

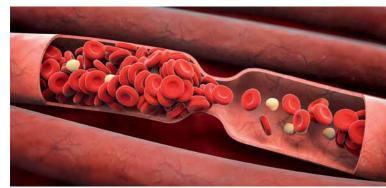
Discharged the same day

Another milestone in endovascular medicine was the so-called transradial approach, which is the minimally invasive insertion of a catheter via an artery on the wrist. "90 to 95 percent of accesses for coronary procedures are now placed here," said Prof. Dr. Christoph W. Kopp, another highly qualified vascular physician

conscious during the procedure. "For this reason, the patients' trust in the interventionist and his team is of particular importance", said Prof. Kopp, praising the outstanding team at the WPK.

Bypass and atherectomy

Narrowed vessels can be treated by vascular surgeons from head to toe. An incision is made through the skin to reach the vessels, expose them and treat them surgically. The most common options are bypass surgery and atherectomy. A bypass



Constricted arteries can result in serious consequences.

> and cardiologist who regularly works at the WPK. Among the advantages for patients are a lower risk of bleeding, a lower occurrence of renal insufficiency/kidney disease and preserving the post-operative mobility of the patient. "Most patients can go home the day of the endovascular procedure", said Prof. Kopp.

A special feature of endovascular treatment is that the patients are usually not sedated and are fully

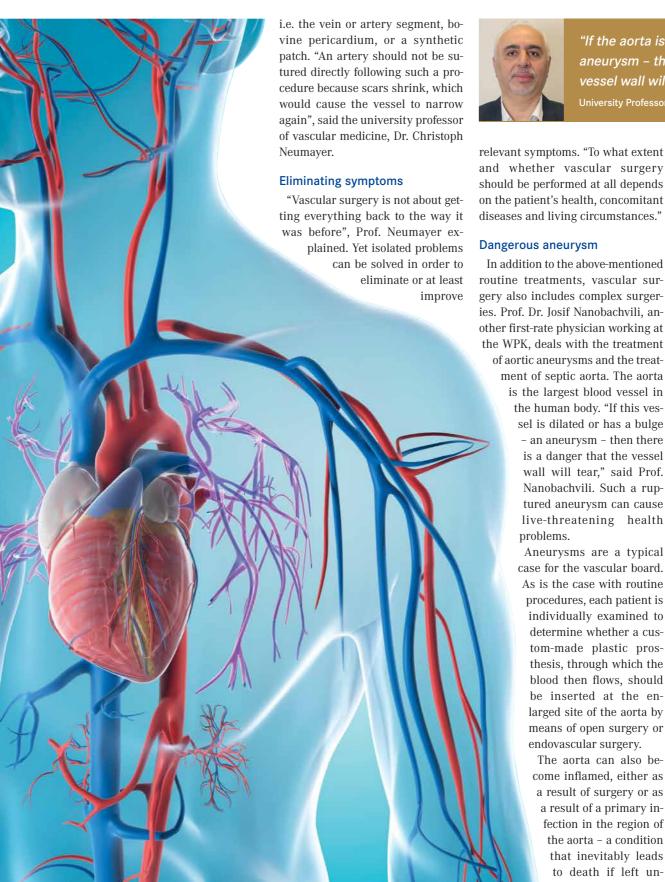
is a surgically created detour of blocked vessels using the patient's own vessel (such as a vein from the leg) or a synthetic graft to redirect blood around the blocked section. This way, the blood can bypass the blocked vessel.

In atherectomy, the clogged artery is cut open lengthwise to remove the often elongated plaque formation. The vessel is then closed with a patch of tissue that is sutured in, using either the patient's own tissue,



"A vessel cannot be sutured immediately because scars shrink, which would cause the vessel to narrow again."

Jniversity Professor Dr. Christoph Neumayer





"If the aorta is dilated or has a bulge – an aneurysm - then there is a danger that the vessel wall will tear."

University Professor Dr. Josif Nanobachvili

relevant symptoms. "To what extent and whether vascular surgery should be performed at all depends on the patient's health, concomitant diseases and living circumstances."

Dangerous aneurysm

In addition to the above-mentioned routine treatments, vascular surgery also includes complex surgeries. Prof. Dr. Josif Nanobachvili, another first-rate physician working at the WPK, deals with the treatment

> ment of septic aorta. The aorta is the largest blood vessel in the human body. "If this vessel is dilated or has a bulge - an aneurysm - then there is a danger that the vessel wall will tear." said Prof. Nanobachvili. Such a ruptured aneurysm can cause live-threatening health problems.

Aneurysms are a typical case for the vascular board. As is the case with routine procedures, each patient is individually examined to determine whether a custom-made plastic prosthesis, through which the blood then flows, should be inserted at the enlarged site of the aorta by means of open surgery or endovascular surgery.

The aorta can also become inflamed, either as a result of surgery or as a result of a primary infection in the region of the aorta - a condition that inevitably leads to death if left untreated. "While treating the septic aorta, the existing synthetic prosthetic must be completely removed and replaced", Prof. Nanobachvili explained. Either an autologous transplant is used, which the surgeon prepares from a previously removed vein of the patient, or a so-called xenograft, i.e. a transplant of animal tissue. This is a very time-consuming procedure.

Hybrid procedures

More often than not the vascular board does not decide in favour of one of the two methods, this is open vascular surgery versus endovascu-



lar surgery, but rather in favour of a combination of both methods. This is referred to as a hybrid procedure. For example, the vascular surgeon could expose the blocked femoral artery and remove the plaque, while in the same session a catheter is inserted upwards and a narrowing in the pelvic floor is stretched and fitted with a stent. "Hybrid procedures have become increasingly common in recent years because they eliminate the need to be hospitalised a second time, said Prof. Neumayer.

In angiography, the blood vessels are made visible using X-rays and contrast agents.



The age of shoulder specialists

Shoulder injuries after a ski or snowboard accident are no laughing matter. Modern ski equipment promotes such injuries.

> The Austrian mountains with their snow-covered slopes attract winter sports enthusiasts every year. But the ski season also has its downsides: Every year, there are about 50,000 accidents on Austria's ski slopes.

Back in the days when skis were still long, it was the lower extremities that usually sustained injuries. "In the past 15 years, however, with

excellent trauma surgeons who are now increasingly taking on ski and snowboard accident cases during the winter - and Prim. Anderl is one

Keyhole surgery

The internationally renowned shoulder, elbow and knee surgeon very often has to deal with torn tendons in the shoulder, in particular in



"In the past 15 years, with carving skis and snowboards having become popular, shoulders are now increasingly affected." rim. Dr. Werner Anderl

carving skis and snowboards having become popular, shoulders are now increasingly affected", said Prim. Dr. Werner Anderl. "The shorter the skis, the more frequently the upper extremities are hurt." Knee injuries also show completely different injury patterns than in the past due to modern ski equipment. The Wiener Privatklinik (WPK) has a number of

the rotator cuff. Today, this injury can be treated with arthroscopic or kevhole surgery. For shoulder dislocation cases with an acetabular bone defect, Prim. Anderl has developed a special arthroscopic shoulder stabilisation method: the arthroscopic bone block procedure or "J-Span" technique. In addition, he has developed an arthroscopic shoulder pros-

thesis (Partial Eclipse) for extensive cartilage defects at the humeral head, especially for younger, active patients, thanks to which they can be discharged from the clinic the day after the procedure.

Hidden lesions

Hidden lesions in the shoulder are also a common phenomenon. "These are injuries that don't seem so bad at first, which is why the patient doesn't seek medical care right away", Prim. Anderl explained. "But after a few months the symptoms are still there, with a risk of developing a frozen shoulder. That is why pain in the shoulder after a ski or snowboard accident should always be looked at quickly - the specialists in the WPK are always ready.

Get fit for the slopes!

Prevention is still the best medicine: "The main reason for ski accidents is a lack of fitness", said Prim. Anderl. "The body needs to be trained before hitting the slopes skiers are unfortunately no longer



We are happy to assist international patients to access Wiener Privatklinik First Class Medicine. Over the years we have achieved substantial recognition and trust with international patients. We offer a variety of support services as listed below. Should you have any question please write us.

- Handling information requests for the hospital's services, programs and physicians
- · Locating the right physician to meet the patient's specific needs
- Scheduling appointments, including consultations and follow-up care as well as Deluxe Check-up Programs
- · Facilitating communication with physicians, family, and friends at home
- Assisting with the selection of rehabilitation clinics
- Arranging translations and interpreter services in many languages
- Giving visa support via letter of invitation
- Processing medical cost estimations

- Arranging medical transportations to and from hospital
- Accommodating religious and cultural needs (for example specially prepared meals)
- Arranging technical equipment (such as tablet or fax)
- Organizing VIP transport (to and from airport and within the city) in following languages: German, English, Russian, Romanian
- Accommodation assistance for patient's family members at partner hotels and apartments in Vienna at special rates
- ...anything else that helps make your stay more comfortable.

MIB Department, WHO WE ARE



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IN BRIEF

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■ More and more

Rotator cuff tears

Hidden lesions

ski-related shoulder



WIEN P





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