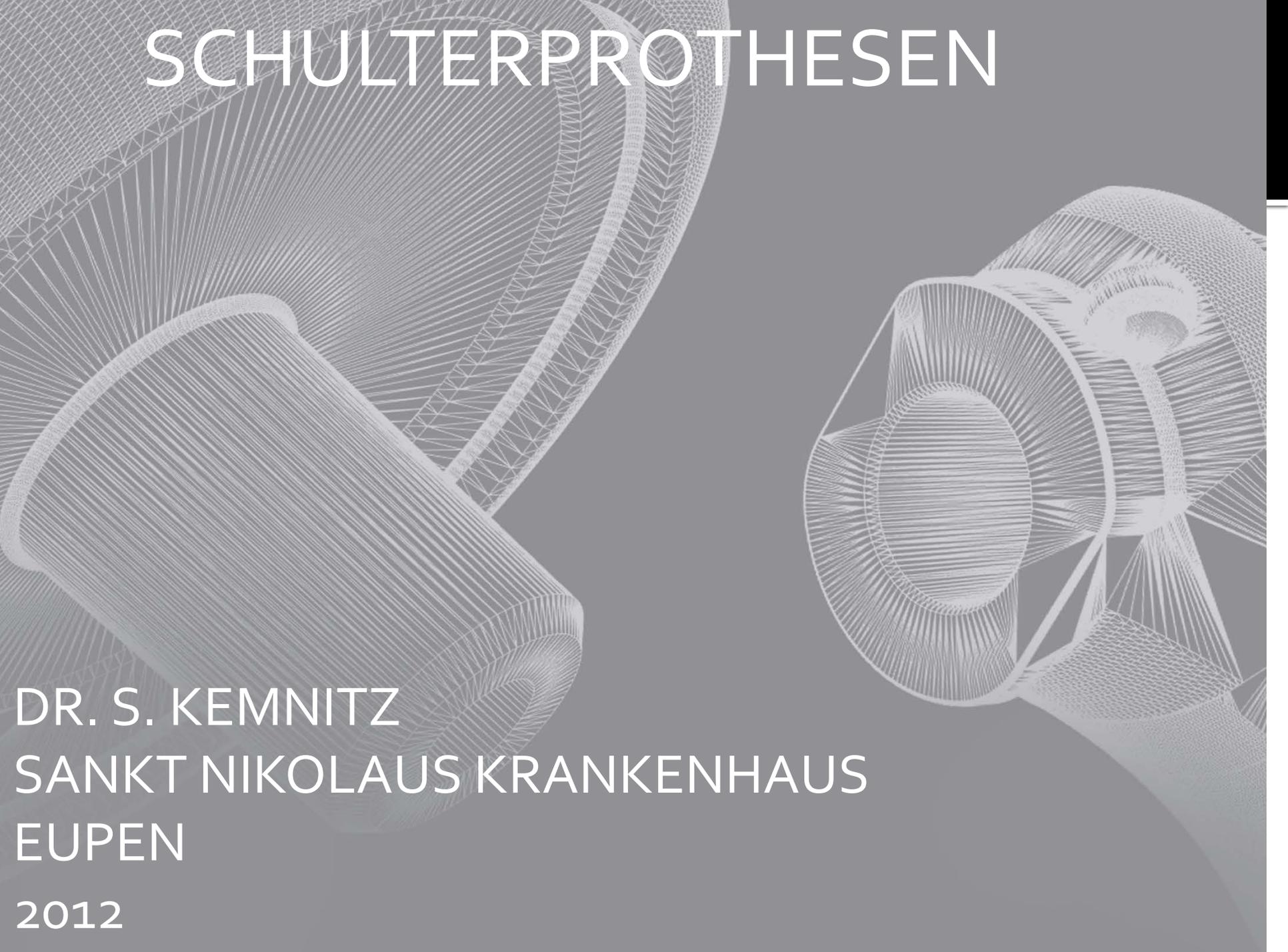


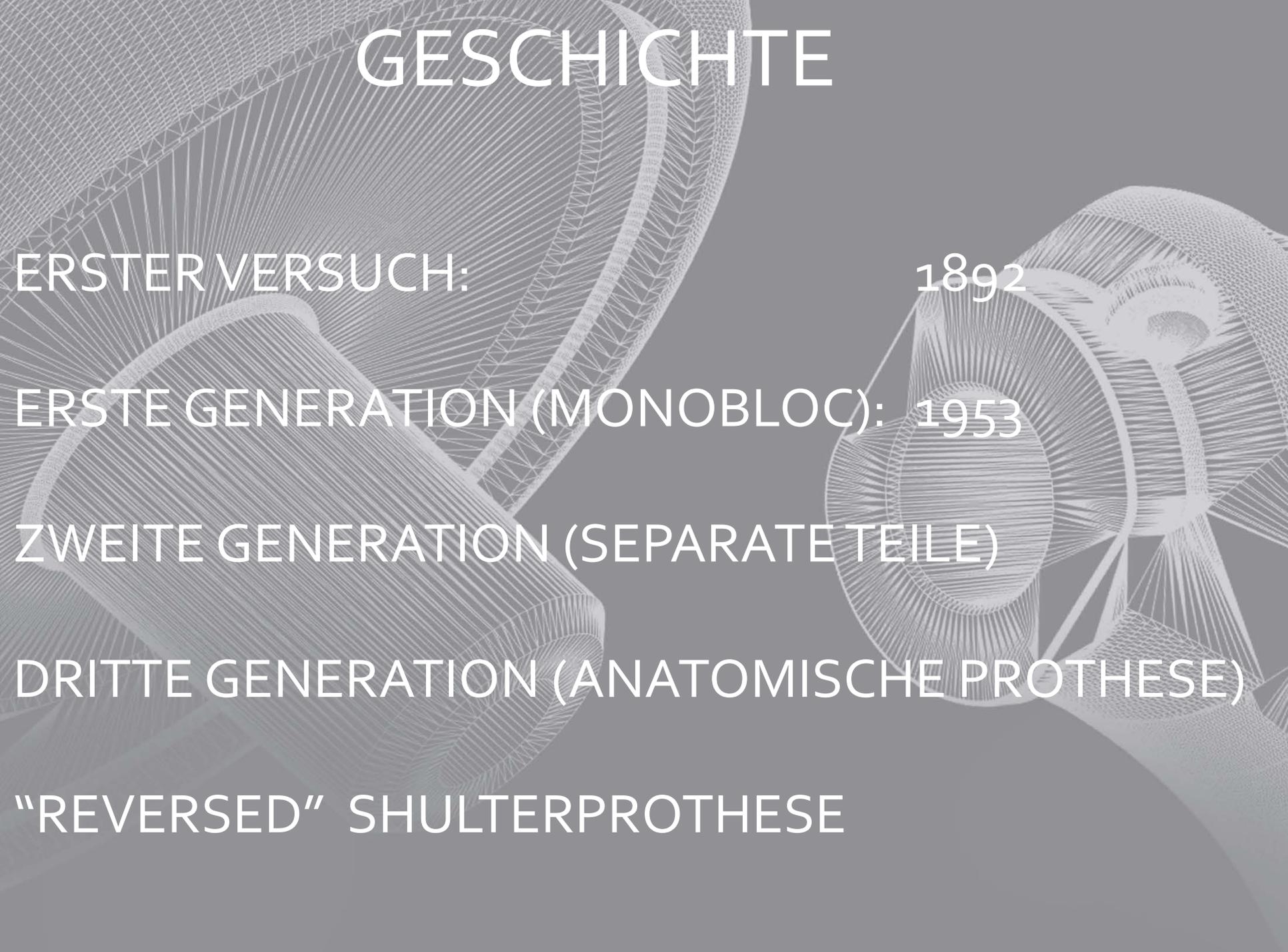
# SCHULTERPROTHESEN

The background of the slide features several wireframe models of shoulder prostheses. These models are rendered in a light gray color against a darker gray background. They show the complex, multi-layered structure of the prostheses, including the humeral head, the glenoid component, and the surrounding fixation structures. The wireframe style highlights the geometric and structural details of the implants.

DR. S. KEMNITZ  
SANKT NIKOLAUS KRANKENHAUS  
EUPEN

2012

# GESCHICHTE

The background features several wireframe models of shoulder prostheses, illustrating the evolution of the design. The models are rendered in a light gray color against a dark gray background. They show various components like the humeral head, glenoid, and stem, with some models showing more complex, anatomical structures.

ERSTER VERSUCH:

1892

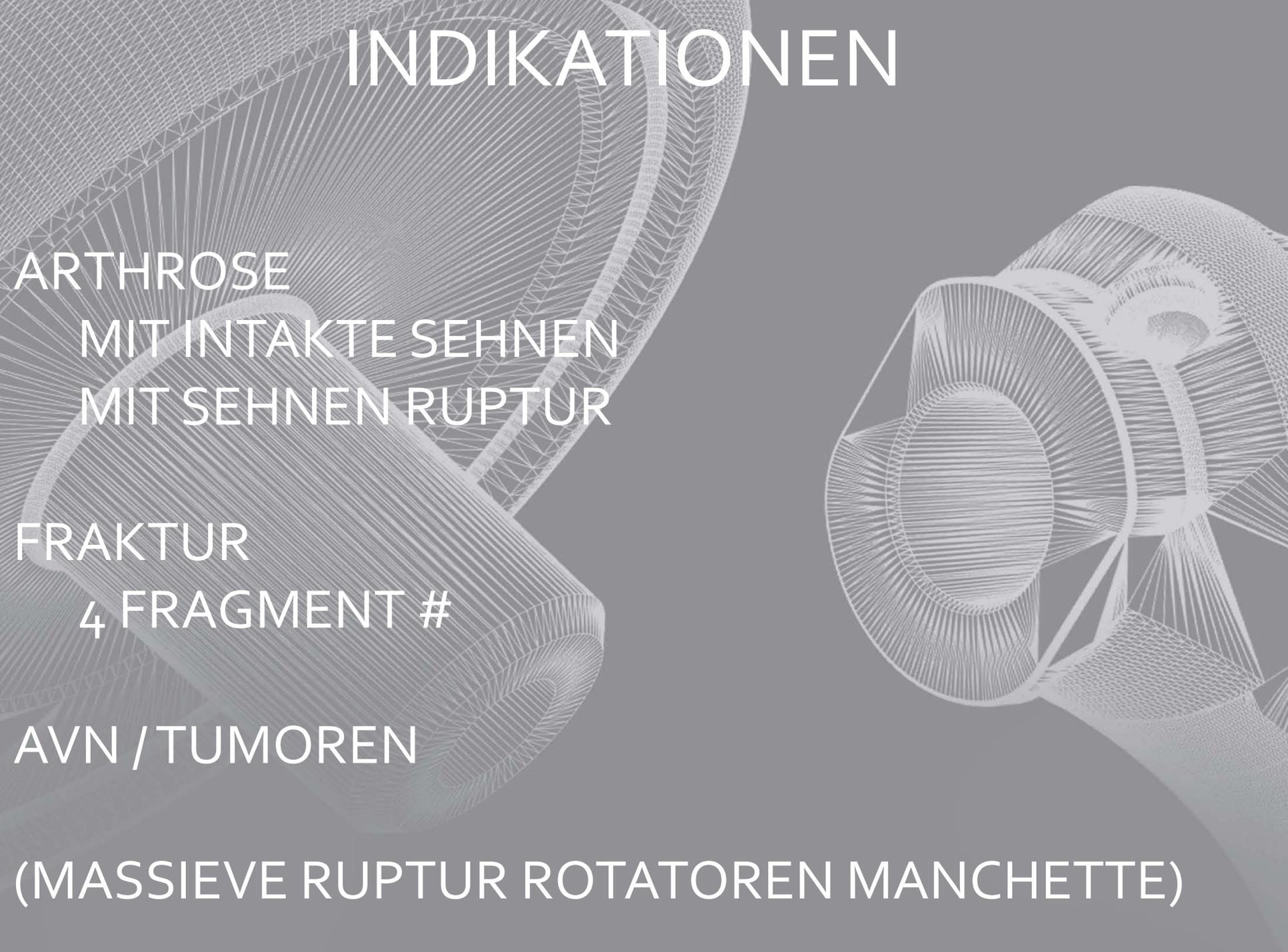
ERSTE GENERATION (MONOBLOC): 1953

ZWEITE GENERATION (SEPARATE TEILE)

DRITTE GENERATION (ANATOMISCHE PROTHESE)

“REVERSED” SHULTERPROTHESE

# INDIKATIONEN



ARTHROSE  
MIT INTAKTE SEHNEN  
MIT SEHNEN RUPTUR

FRAKTUR  
4 FRAGMENT #

AVN / TUMOREN

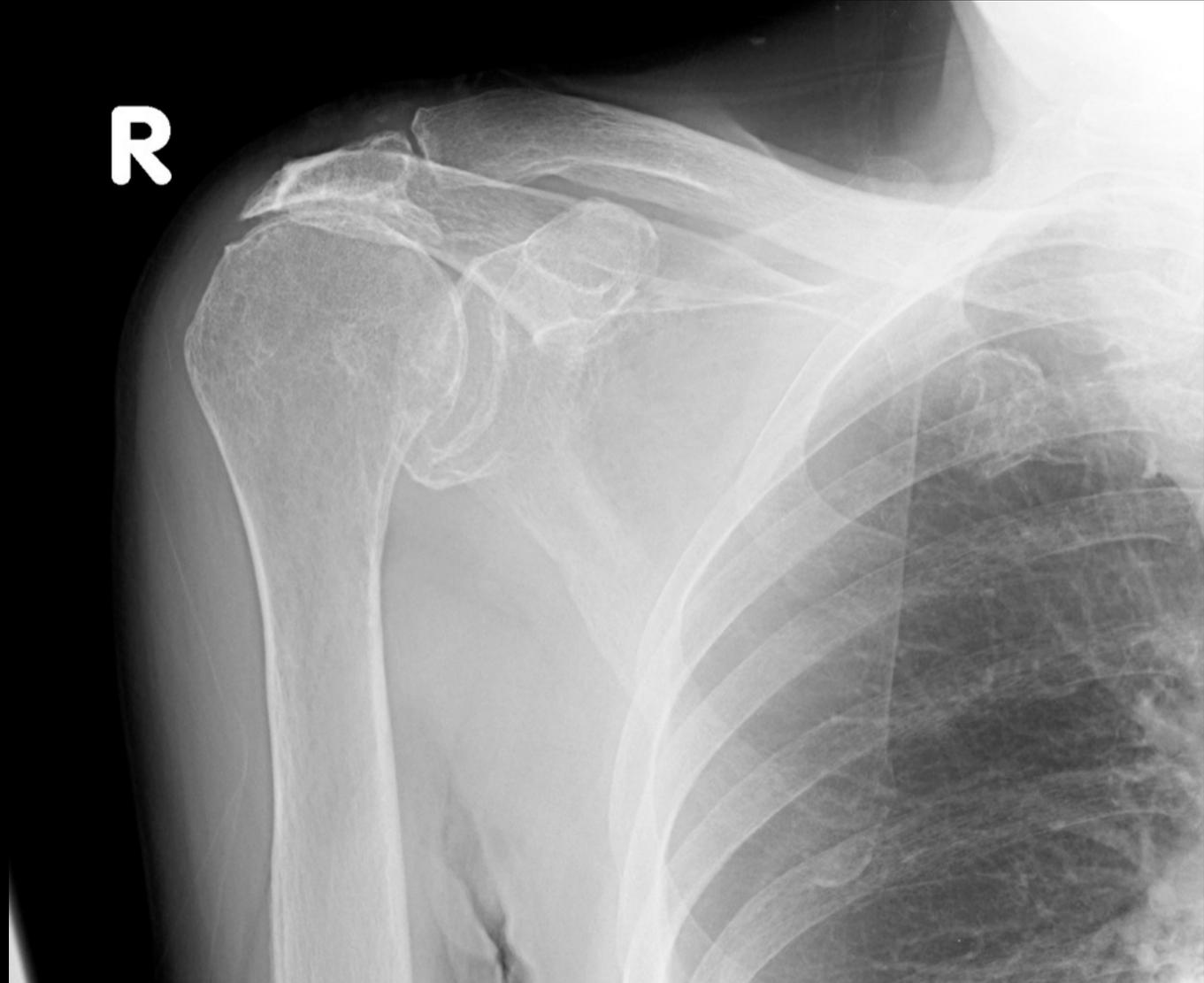
(MASSIVE RUPTUR ROTATOREN MANCHETTE)

# ARTHROSE



# ROTATOR CUFF ARTHROPATHY

**R**



# Shoulder - Fractures

Neer's Classification system

One-Part

Two-Part

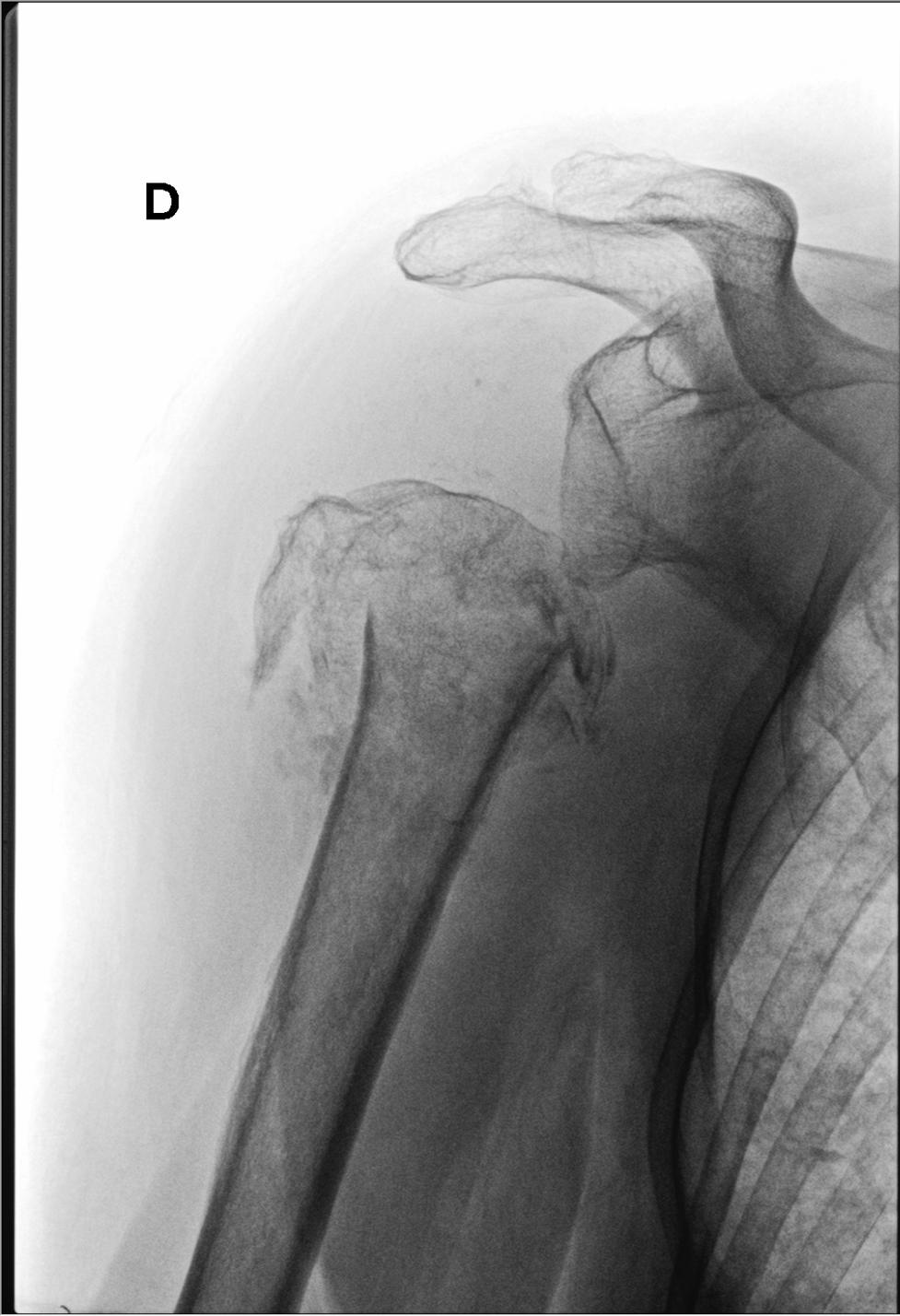
Three-Part

Four-Part

Fracture with  
Dislocation

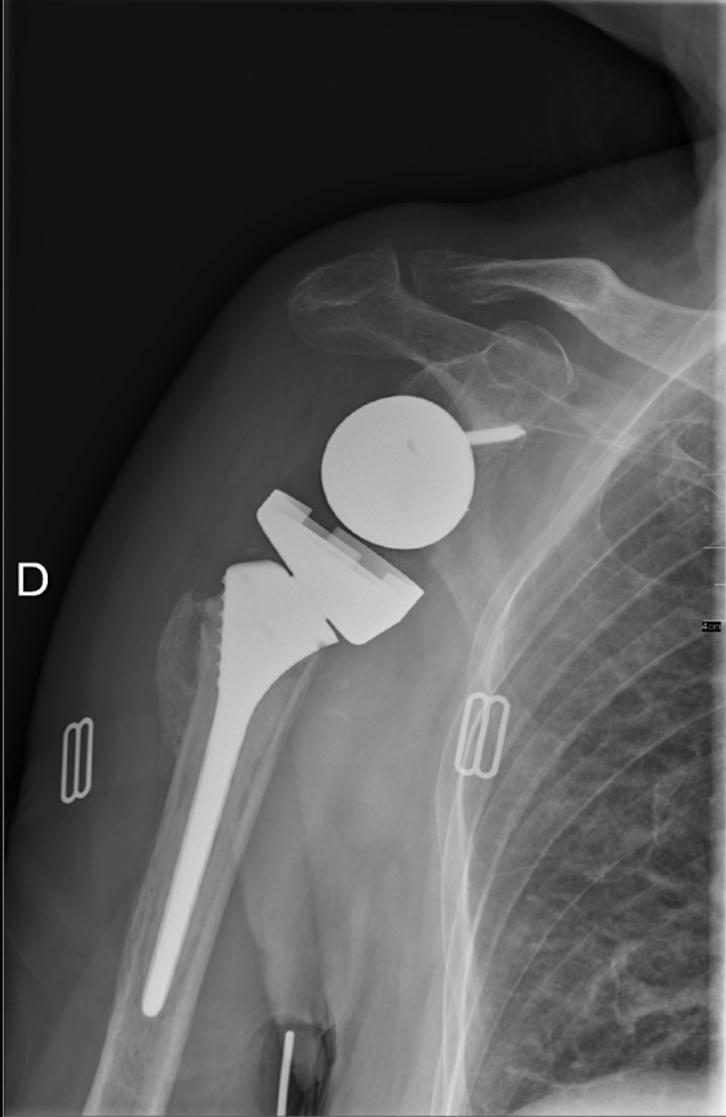


D

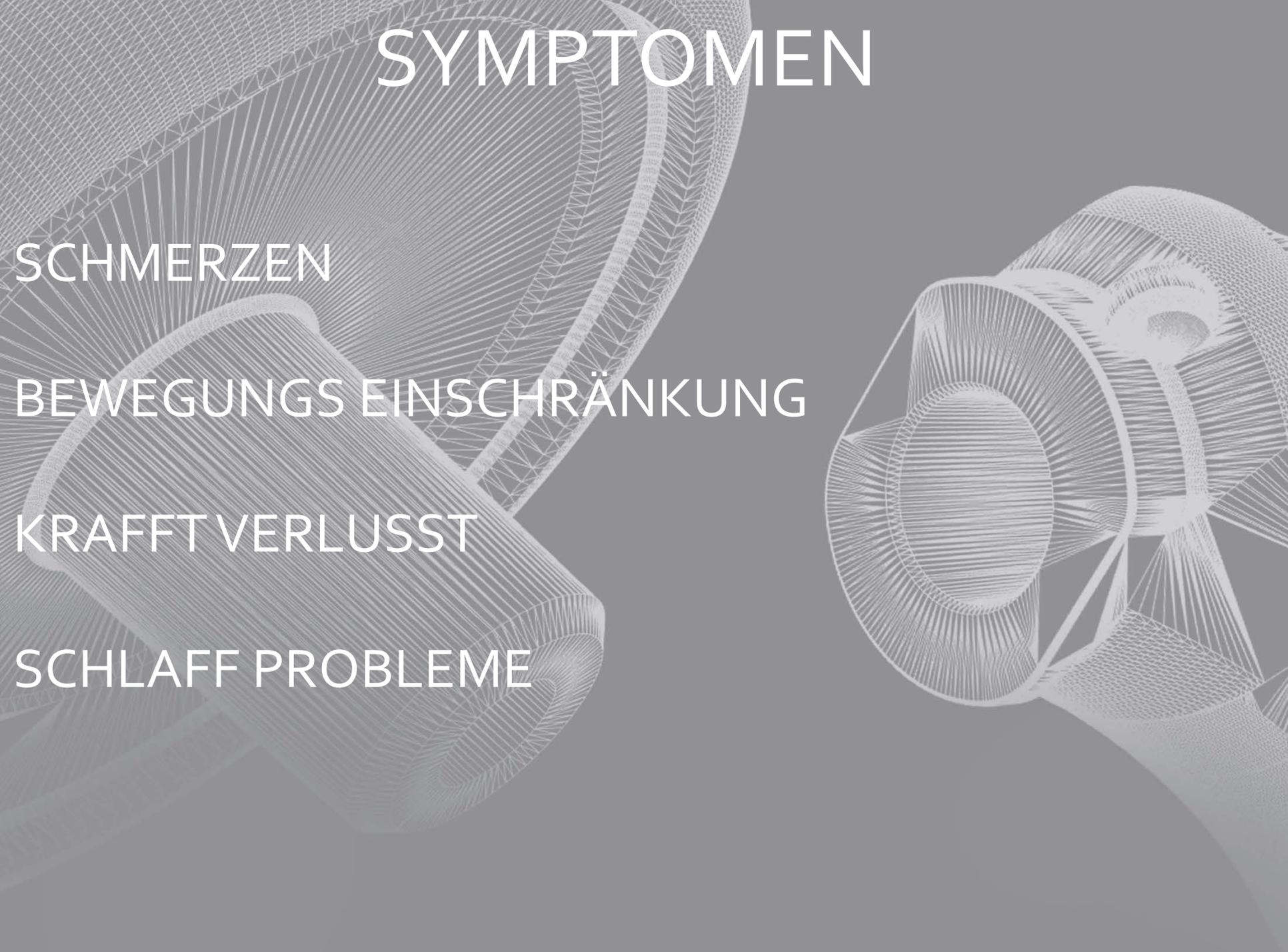


D





# SYMPTOMEN



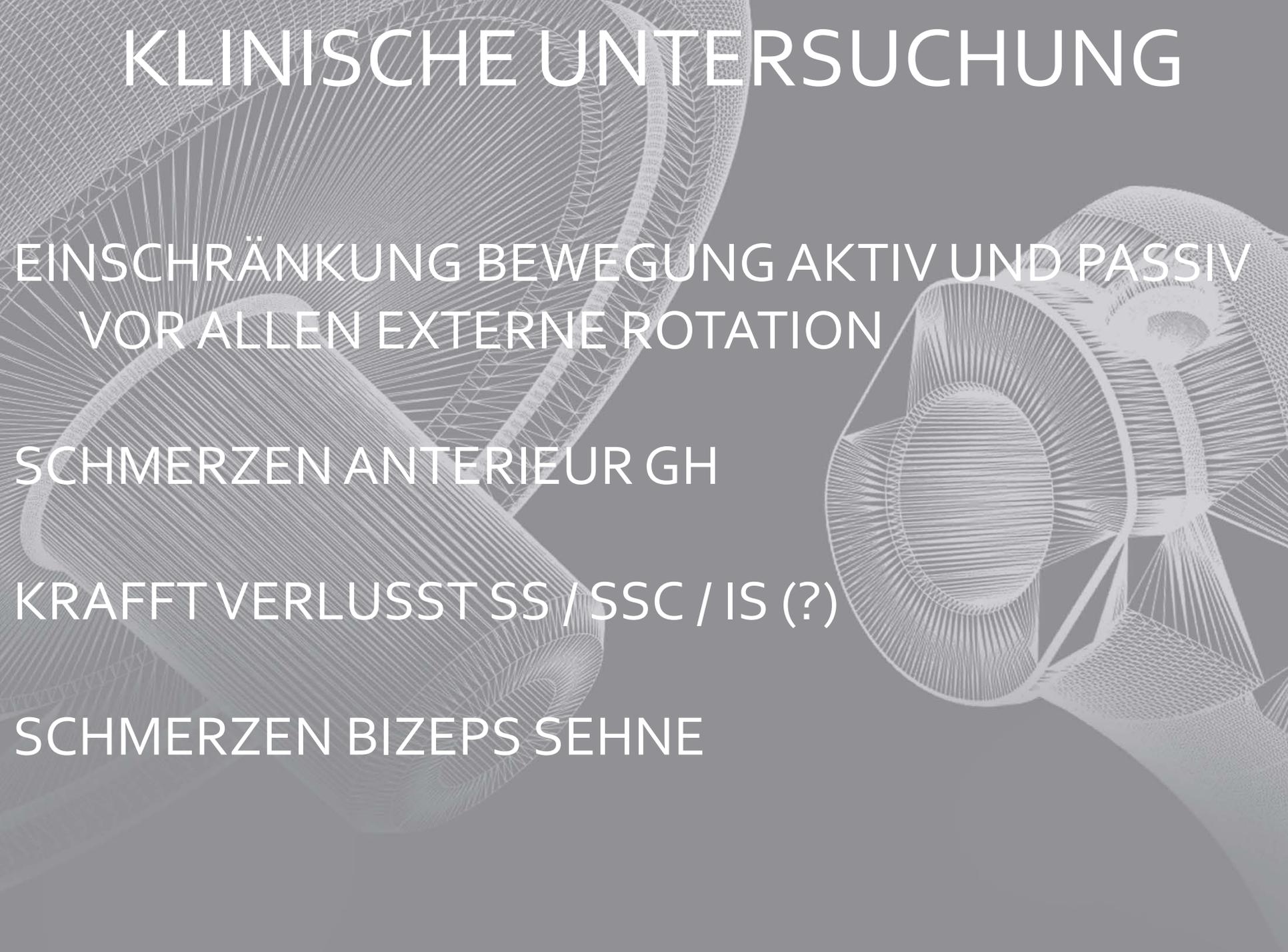
SCHMERZEN

BEWEGUNGS EINSCHRÄNKUNG

KRAFFTVERLUSST

SCHLAFF PROBLEME

# KLINISCHE UNTERSUCHUNG



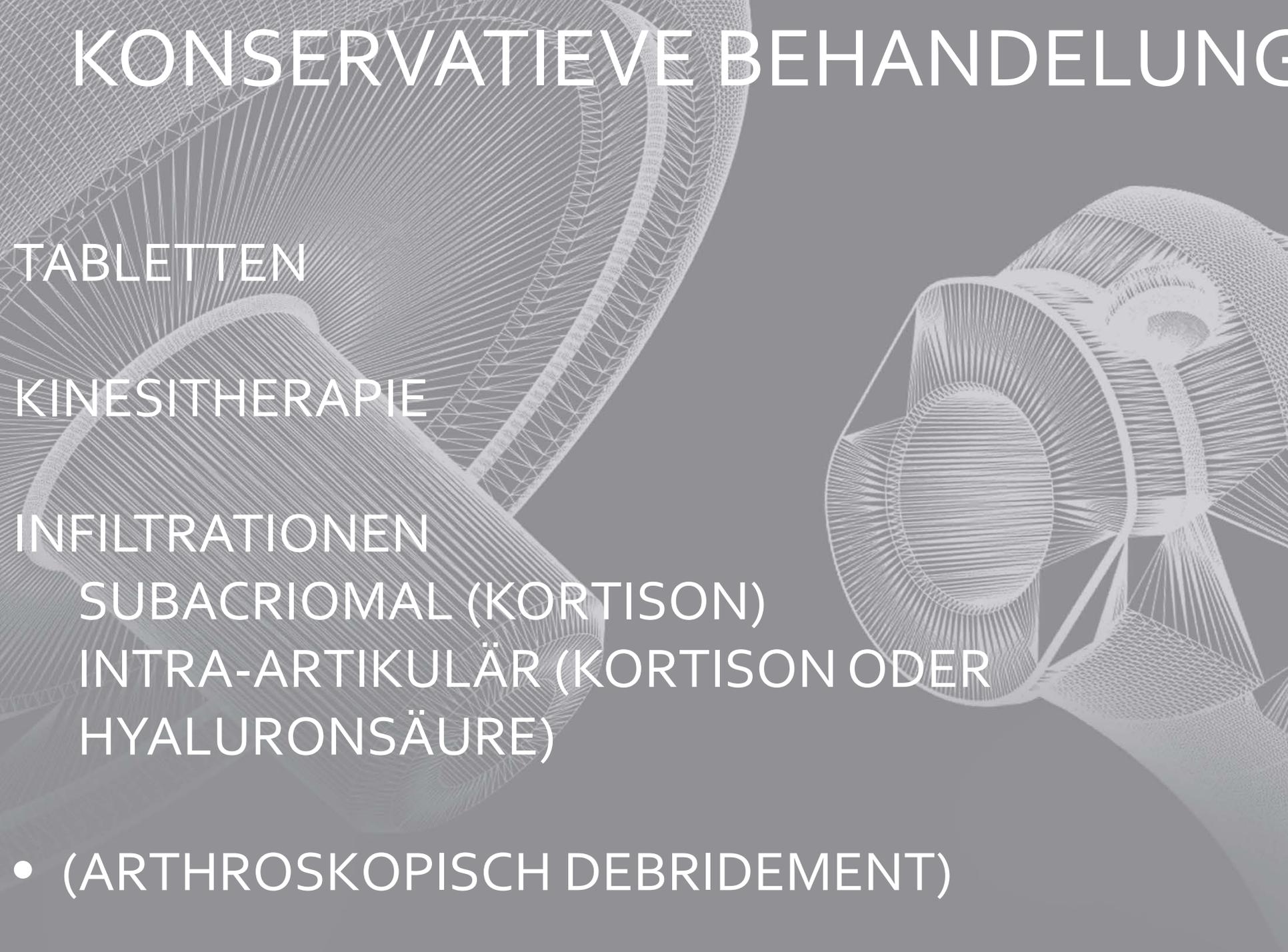
EINSCHRÄNKUNG BEWEGUNG AKTIV UND PASSIV  
VOR ALLEN EXTERNE ROTATION

SCHMERZEN ANTERIEUR GH

KRAFFTVERLUSST SS / SSC / IS (?)

SCHMERZEN BIZEPS SEHNE

# KONSERVATIVE BEHANDLUNG



TABLETTEN

KINESITHERAPIE

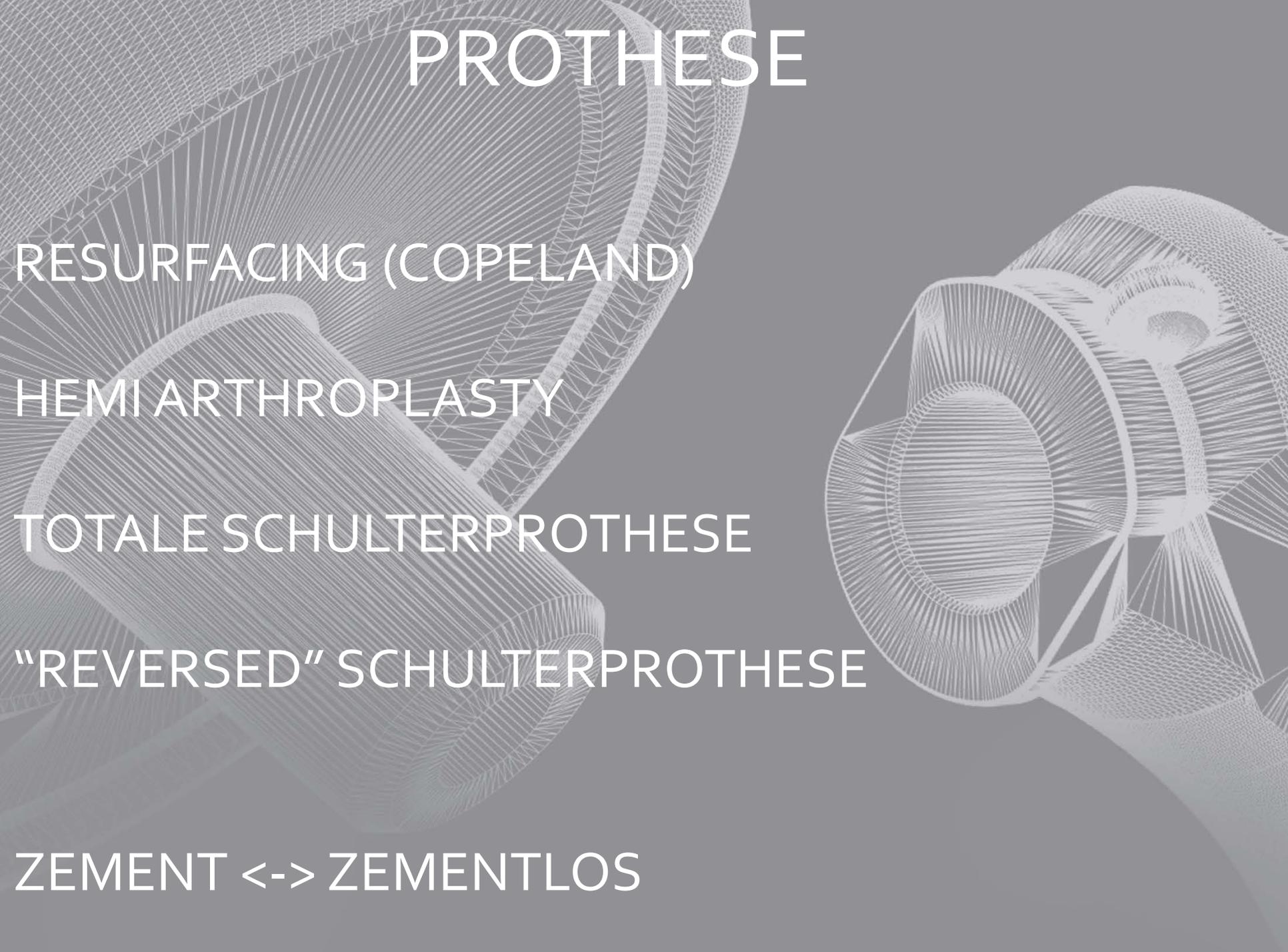
INFILTRATIONEN

SUBACRIOMAL (KORTISON)

INTRA-ARTIKULÄR (KORTISON ODER  
HYALURONSÄURE)

- (ARTHROSKOPISCH DEBRIDEMENT)

# PROTHESE

The background features several wireframe models of shoulder prostheses. On the left, there are two cylindrical components, likely humeral heads or necks, shown in perspective. On the right, a more complex model shows a humeral head with a glenoid component, illustrating a total shoulder prosthesis. The wireframe style uses thin, light-colored lines to define the geometry of the implants.

RESURFACING (COPELAND)

HEMIARTHROPLASTY

TOTALE SCHULTERPROTHESE

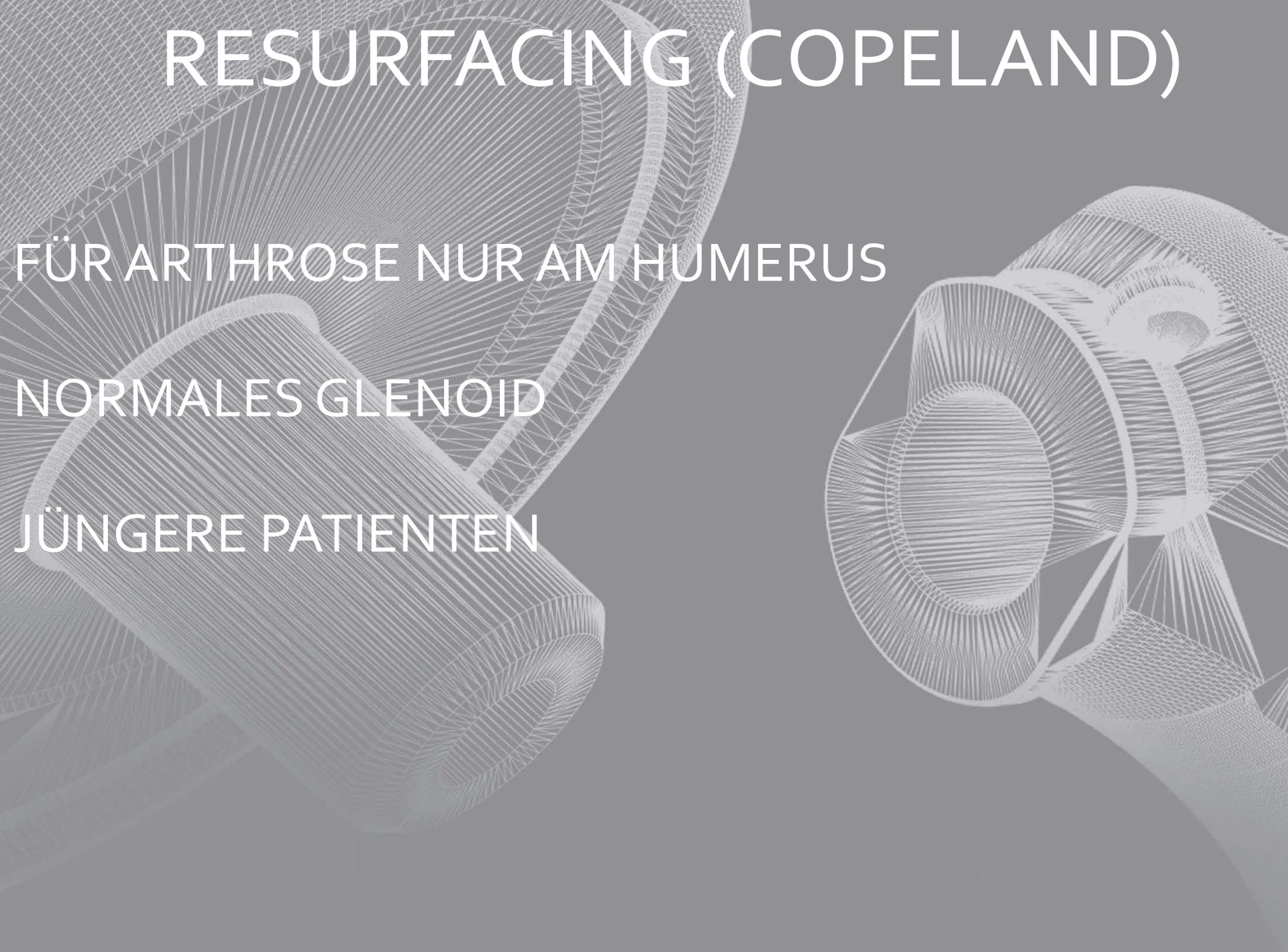
“REVERSED” SCHULTERPROTHESE

ZEMENT <-> ZEMENTLOS

# RESURFACING (COPELAND)



# RESURFACING (COPELAND)

The image features two 3D wireframe models of a shoulder joint. The model on the left shows a normal shoulder joint with a smooth, rounded humeral head fitting into the glenoid socket. The model on the right shows a shoulder joint with a resurfacing prosthesis, where the humeral head is replaced by a flat, circular surface. The background is a dark gray with a subtle grid pattern.

FÜR ARTHROSE NUR AM HUMERUS

NORMALES GLENOID

JÜNGERE PATIENTEN

# RESURFACING (COPELAND)

The background features two 3D wireframe models of a humeral head and neck. The model on the left shows a complete humeral head with a textured surface, while the model on the right shows a similar head with a different surface texture, possibly representing the resurfacing process. The wireframe lines are light gray and set against a dark gray background.

## VORTEILE:

KÜRZERE OP ZEIT / WENIGER BLUTVERLUST

WENIG KNOCHEN ENTFERNEN

EINFACHERE REVISION

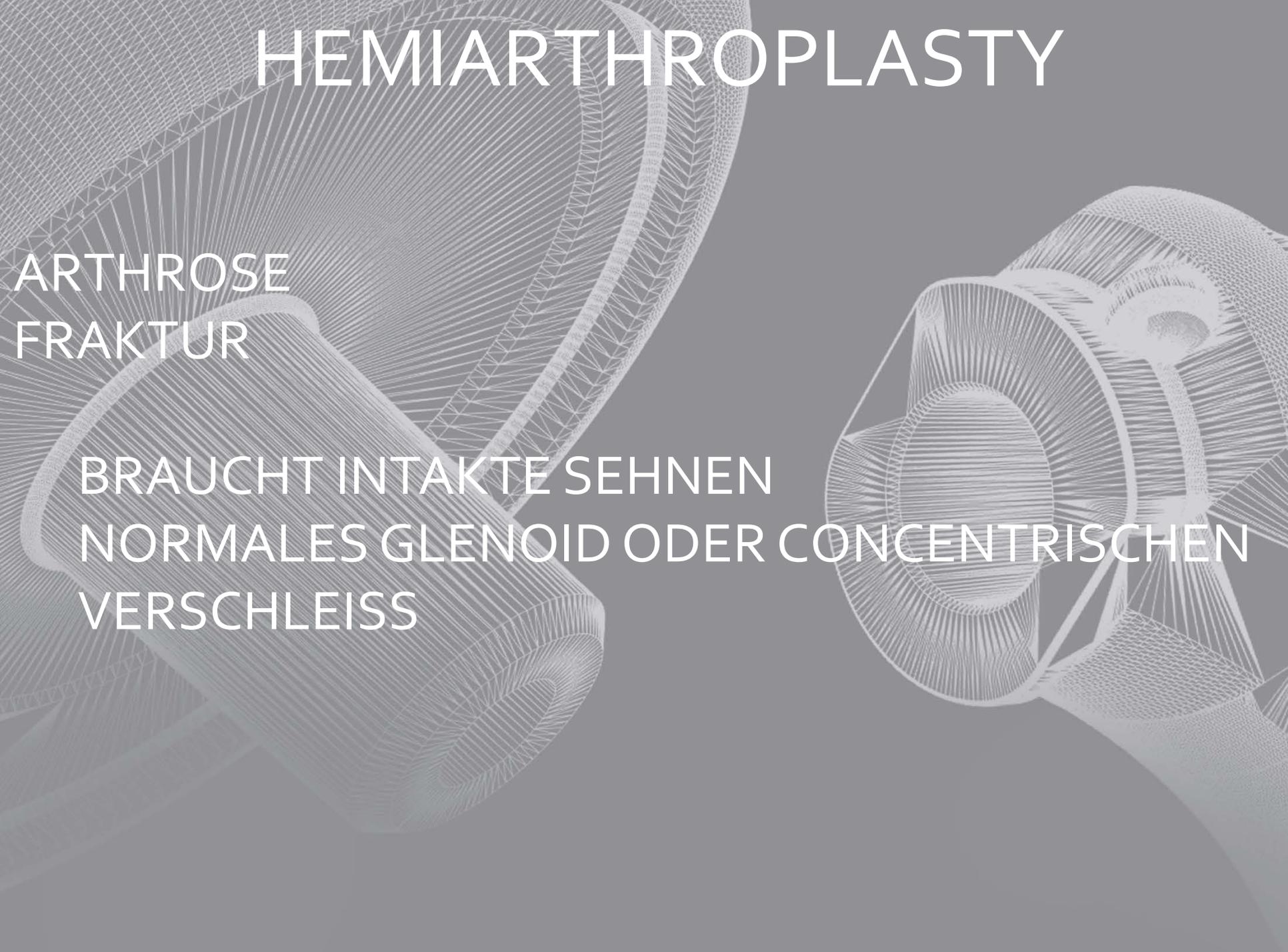
SCHNELLERE REHABILITATION

## NACHTEILE:

NUR HUMERUSKOPF

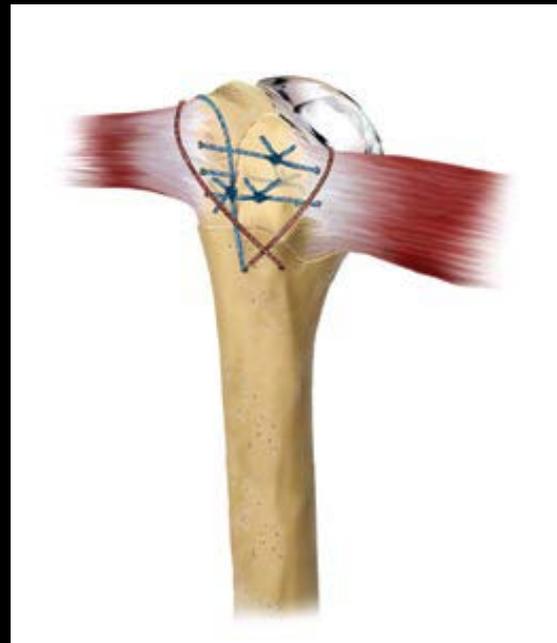
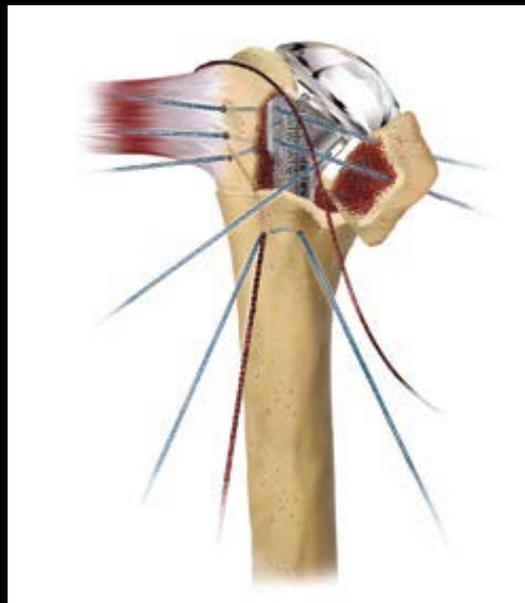
GUTE KNOCHENKWALITÄT NOTWENDIG

# HEMIARTHROPLASTY



ARTHROSE  
FRAKTUR

BRAUCHT INTAKTE SEHNEN  
NORMALES GLENOID ODER CONCENTRISCHEN  
VERSCHLEISS



# HEMIARTHROPLASTY



VORTEILE:

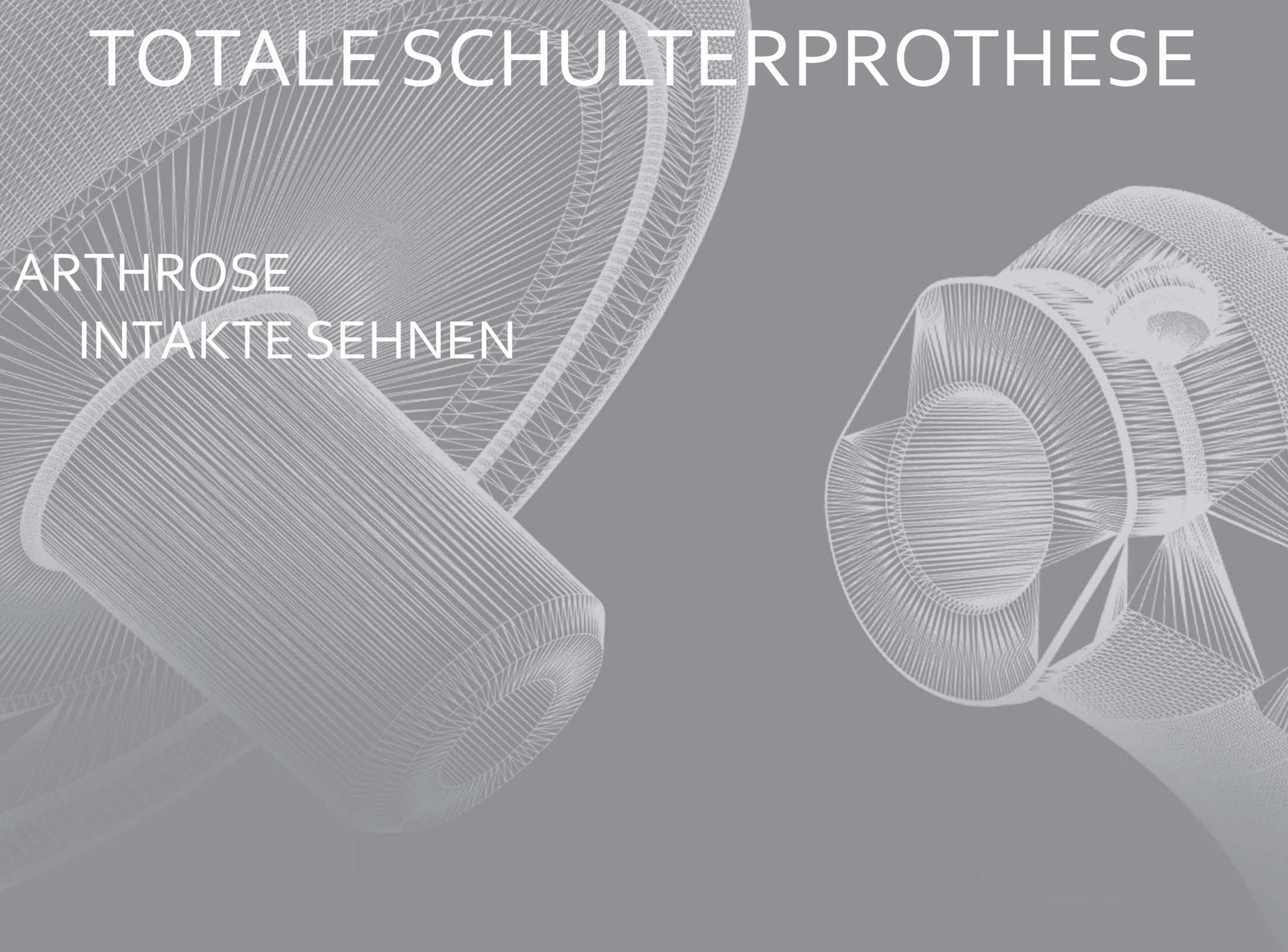
KÜRZERE OP ZEIT / WENIGER BLUTVERLUST

NACHTEILE:

NUR HUMERUSKOPF

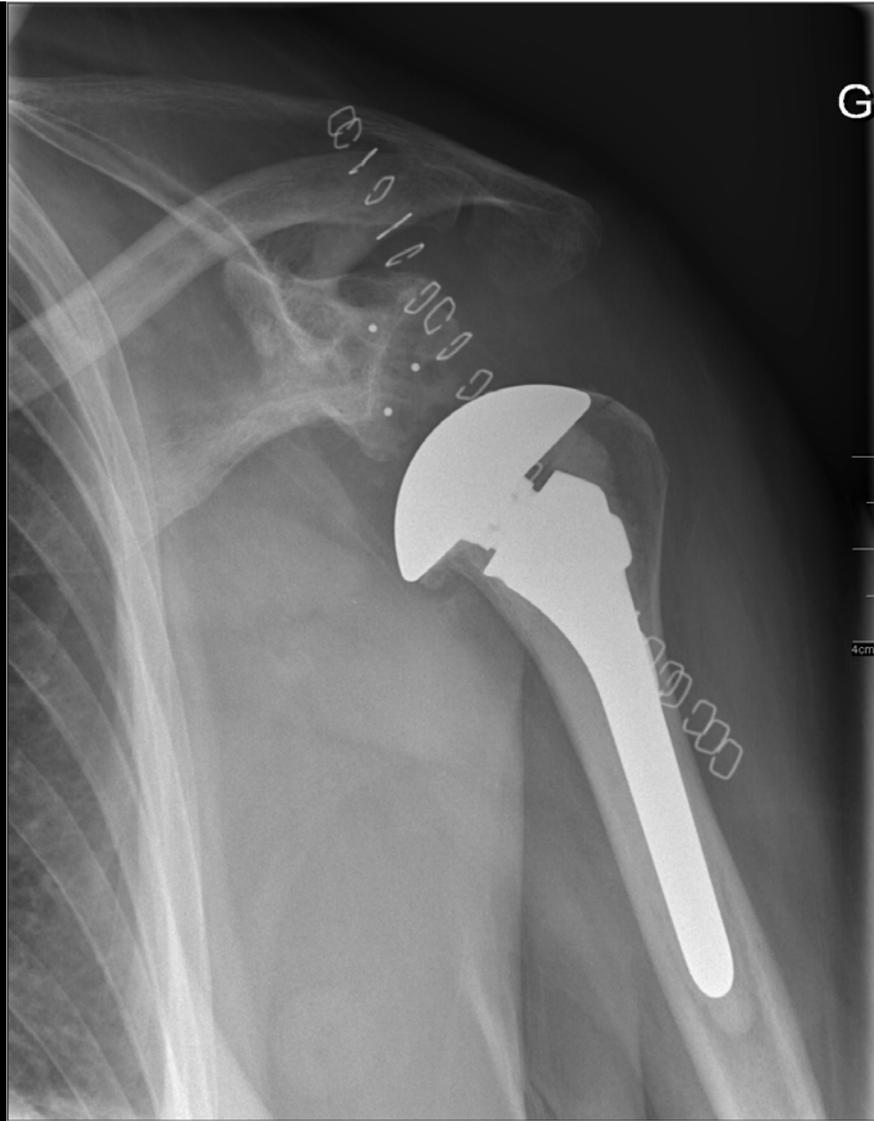
LANGSAMERE REHA WIE TSP

# TOTALE SCHULTERPROTHESE

The image features two 3D wireframe models of a shoulder joint against a dark grey background. The model on the left is a healthy shoulder, showing the humeral head, glenoid, and surrounding ligaments. The model on the right is a total shoulder prosthesis, showing a metal humeral head and a plastic glenoid component. The text is overlaid on the image in white, sans-serif font.

ARTHROSE  
INTAKTE SEHNEN

# TOTALE SCHULTERPROTHESE



# TOTALE SCHULTERPROTHESE



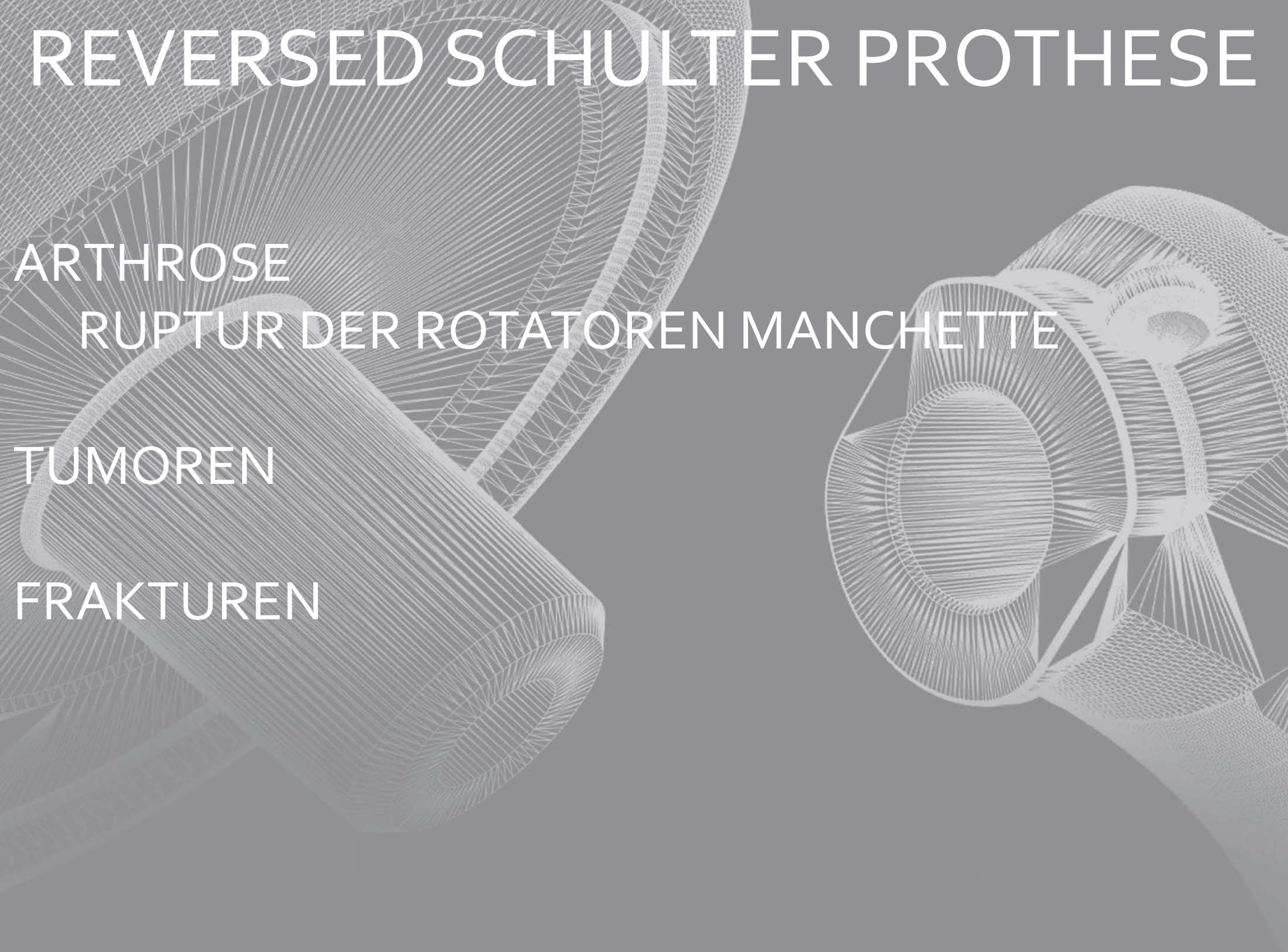
VORTEILE:

BESSERE RESULTATEN ERSTE MONATE  
SCHNELLERE REHABILITATION

NACHTEILE:

LÄNGERE OP ZEIT / MEHR BLUTVERLUST  
LOOSENING GLENOID ?

# REVERSED SCHULTER PROTHESE

The image features two wireframe anatomical models of a shoulder joint. The model on the left is a standard anatomical representation, showing the humeral head, glenoid, and surrounding structures. The model on the right is a reverse shoulder prosthesis, where the humeral head is positioned posteriorly and inferiorly, and the glenoid component is positioned anteriorly and superiorly. The background is a solid dark gray.

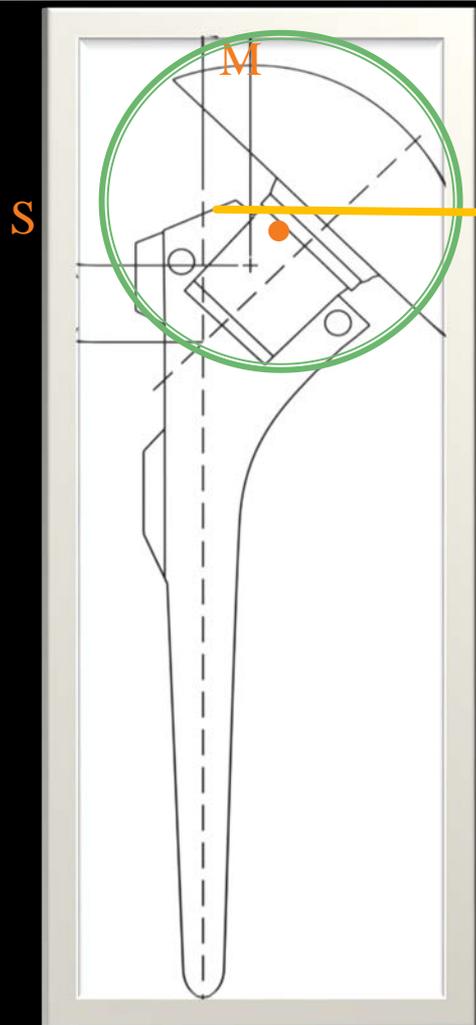
ARTHROSE

RUPTUR DER ROTATOREN MANCHETTE

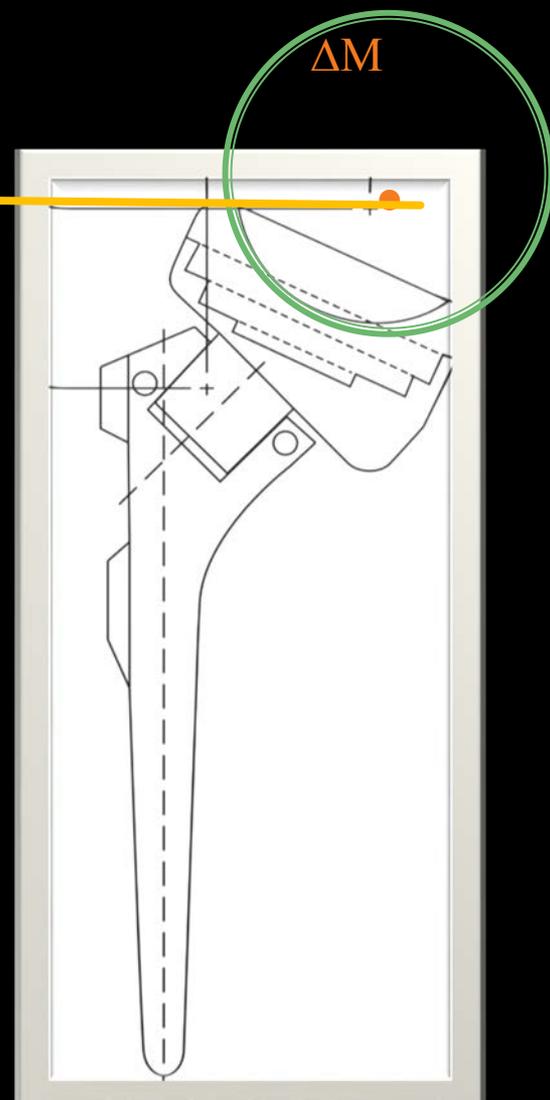
TUMOREN

FRAKTUREN

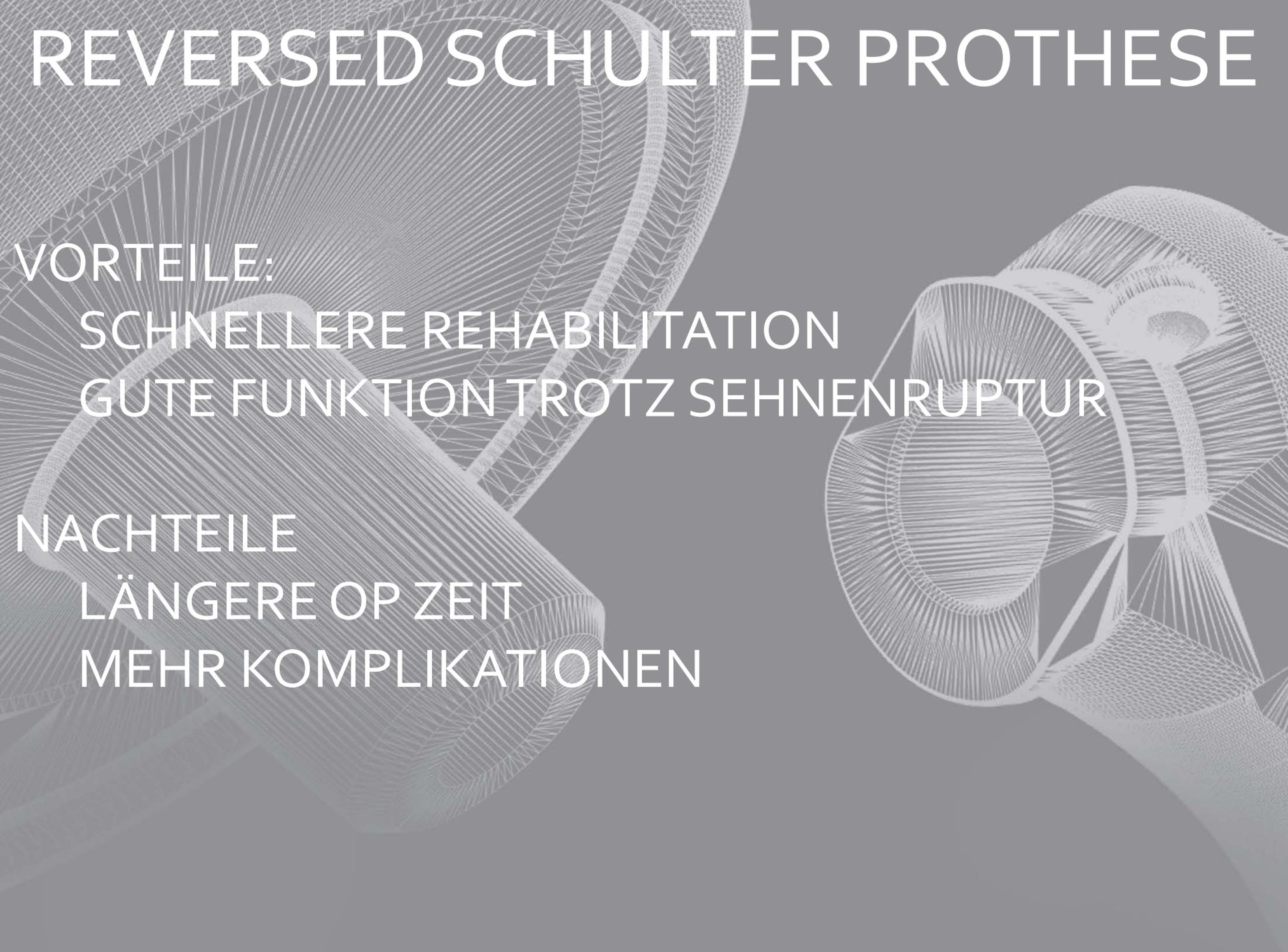




$\Delta S$



# REVERSED SCHULTER PROTHESE

The background features two 3D wireframe models of a shoulder joint. The model on the left shows a natural shoulder joint with the humeral head positioned anteriorly. The model on the right shows a reverse shoulder prosthesis, where the humeral head is positioned posteriorly, creating a different center of rotation and biomechanics.

## VORTEILE:

SCHNELLERE REHABILITATION

GUTE FUNKTION TROTZ SEHNENRUPTUR

## NACHTEILE

LÄNGERE OP ZEIT

MEHR KOMPLIKATIONEN

# KOMPLIKATIONEN

The image features a dark grey background with several white wireframe models of a shoulder joint. One model on the left shows a dislocation (luxation) where the humeral head is displaced from the glenoid socket. Another model on the right shows a fracture of the humeral head. The text is overlaid on these models.

LUXATION

BLUTUNG

LOOSENING

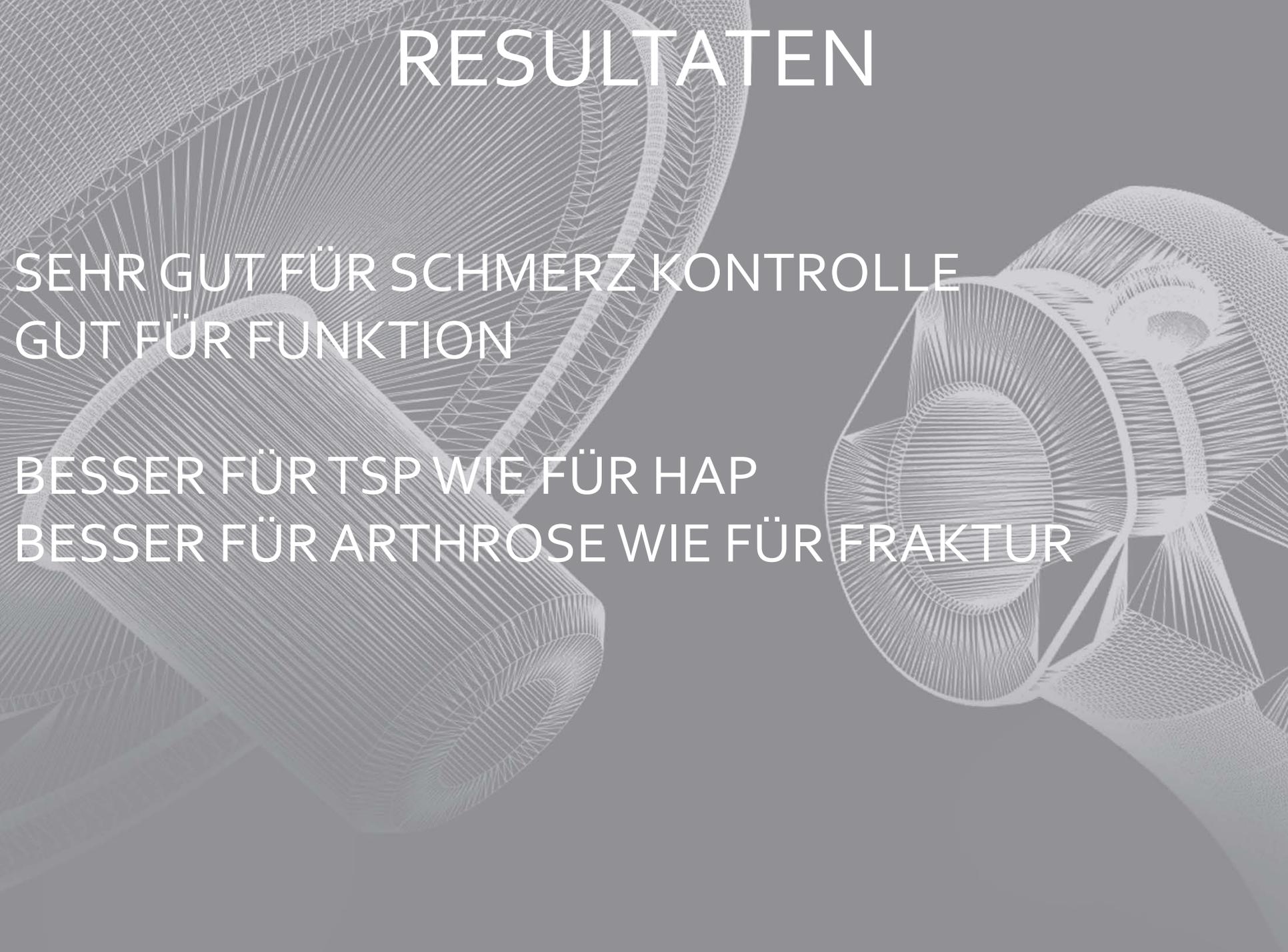
INFEKTION

NERFEN SCHADEN

BEWEGUNGS EINSCHRÄNKUNG

SCHMERZEN

# RESULTATEN

The background features two wireframe anatomical models. On the left is a hip joint, showing the femoral head and acetabulum. On the right is a knee joint, showing the femur, tibia, and patella. The models are rendered in a light gray color against a dark gray background.

SEHR GUT FÜR SCHMERZ KONTROLLE  
GUT FÜR FUNKTION

BESSER FÜR TSP WIE FÜR HAP  
BESSER FÜR ARTHROSE WIE FÜR FRAKTUR

# REHABILITATION

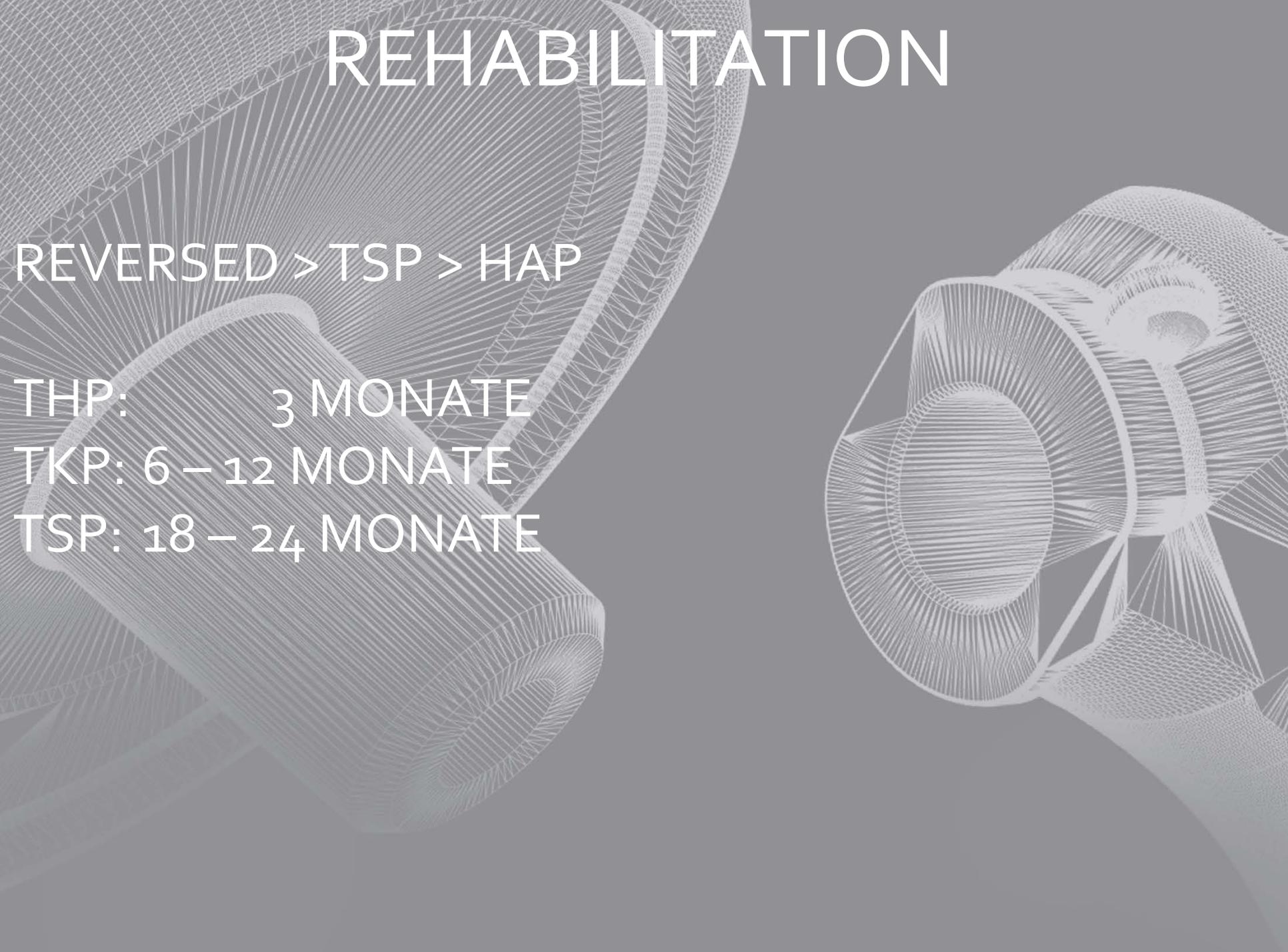
6 WOCHEN ZIMMERTASCHE

KINE

6 WOCHEN PASSIVE ÜBUNGEN  
KRAFT AUFBAU AB 3 MONATE



# REHABILITATION

The background features two wireframe anatomical models of a hand and wrist joint. The model on the left shows a side view of the hand, with the fingers and thumb visible. The model on the right shows a more complex view, possibly a dorsal or palmar view, highlighting the intricate structure of the wrist and hand bones and joints.

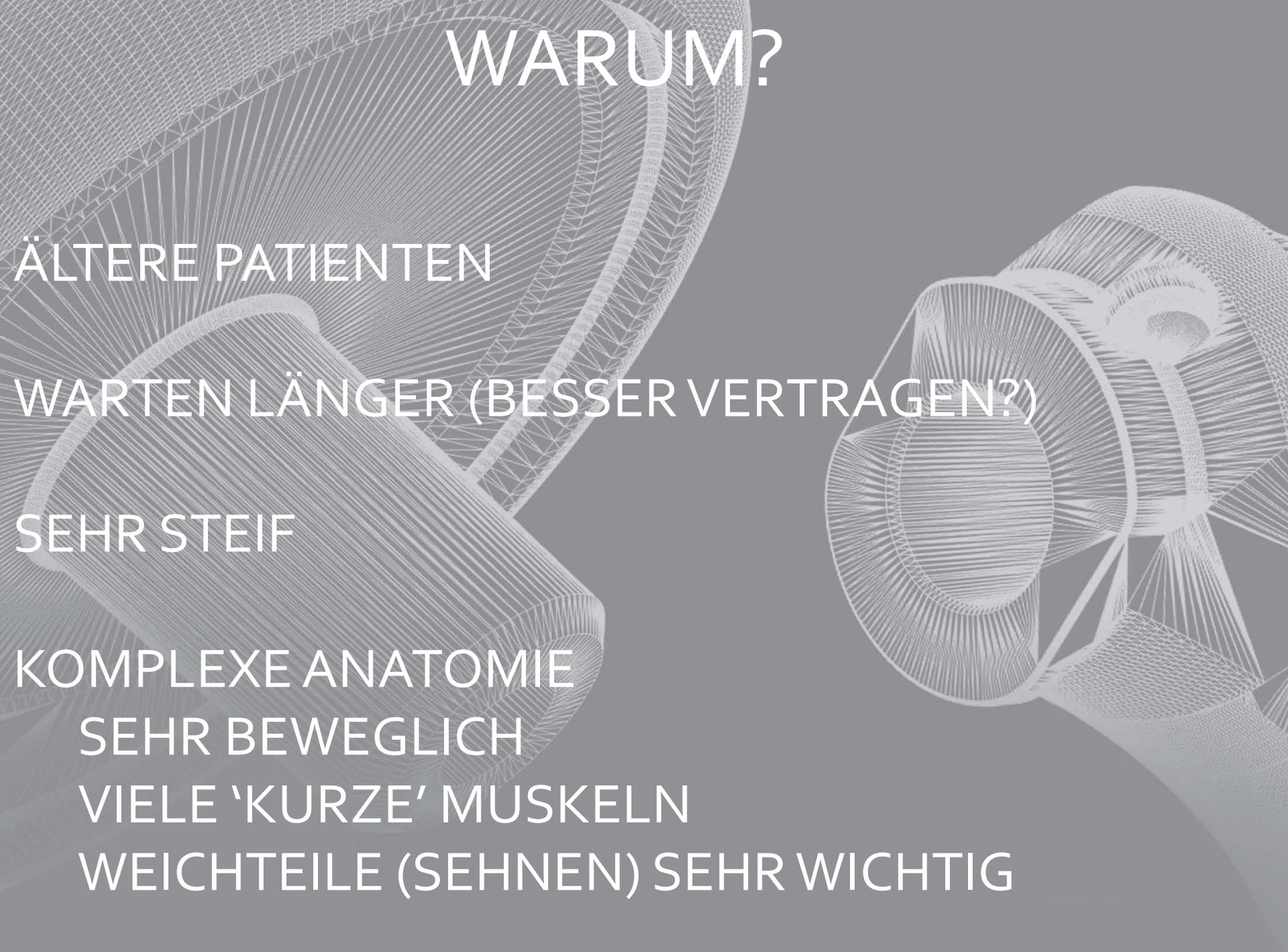
REVERSED > TSP > HAP

THP: 3 MONATE

TKP: 6 – 12 MONATE

TSP: 18 – 24 MONATE

# WARUM?



ÄLTERE PATIENTEN

WARTEN LÄNGER (BESSER VERTRAGEN?)

SEHR STEIF

KOMPLEXE ANATOMIE

SEHR BEWEGLICH

VIELE 'KURZE' MUSKELN

WEICHTEILE (SEHNEN) SEHR WICHTIG

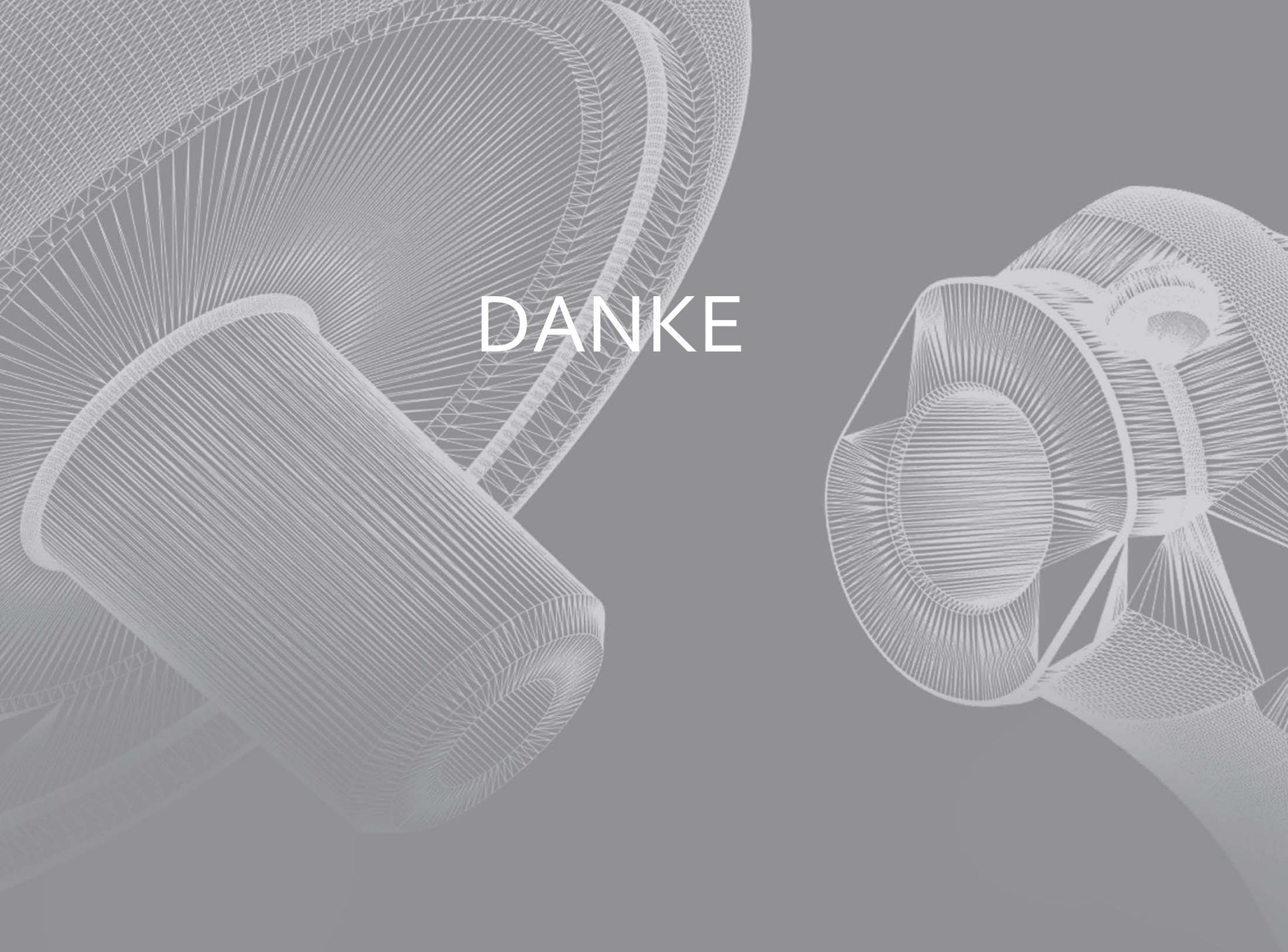
# EVOLUTION?

The background features two wireframe models of prosthetic limbs. On the left, a hand and forearm are shown in a wireframe mesh. On the right, a more complex, multi-segmented prosthetic arm is shown, also in a wireframe mesh. The overall aesthetic is technical and futuristic.

BESSERE RESULTATEN  
BESSERE "HARDWARE"  
MODULÄREN PROTHESE  
GROSSE AUSWAHL

-> PROTHESE WIRD ANGEPAST AN DER  
SCHULTER

MEHR ERFAHRUNG?  
BESSER BEKANNT?

The background features several overlapping, semi-transparent wireframe structures. These structures are composed of numerous thin, light-colored lines that form complex, curved, and layered geometric shapes, resembling architectural models or abstract sculptures. The lines are arranged in a way that creates a sense of depth and movement, with some shapes appearing to be in the foreground and others receding into the background. The overall aesthetic is clean, modern, and technical.

DANKE