

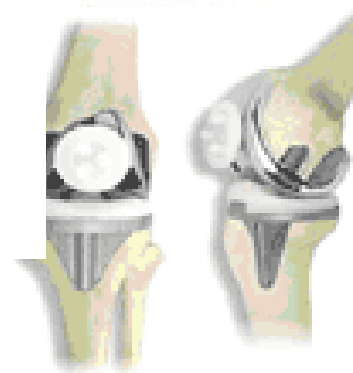
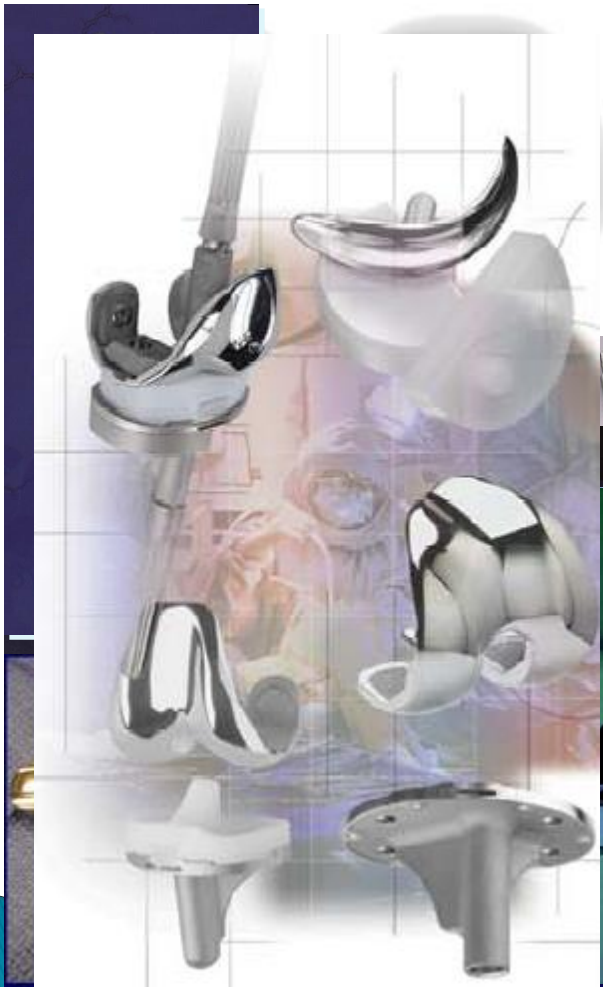
**Jacek Kowalczewski**



**JAKI IMPLANT -  
- CO WYBRAĆ ?**

**Klinika Ortopedii i Chorób Zapalnych Narządu Ruchu CMKP**

# CO WYBRAĆ ?



ne Trauma BioMaterials

**Kinematyka implantu**

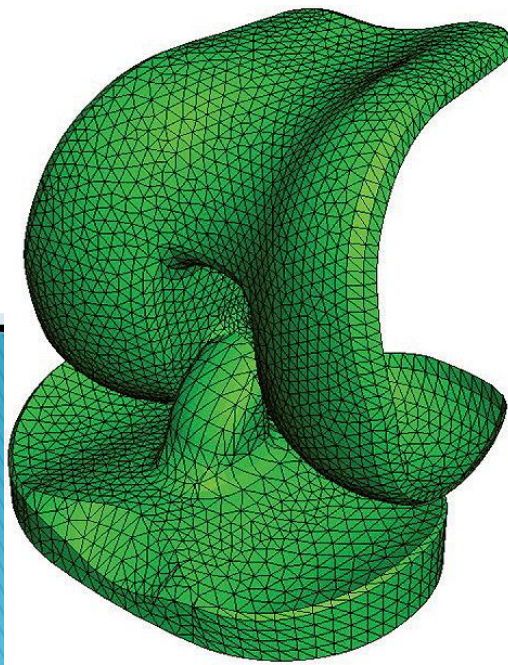
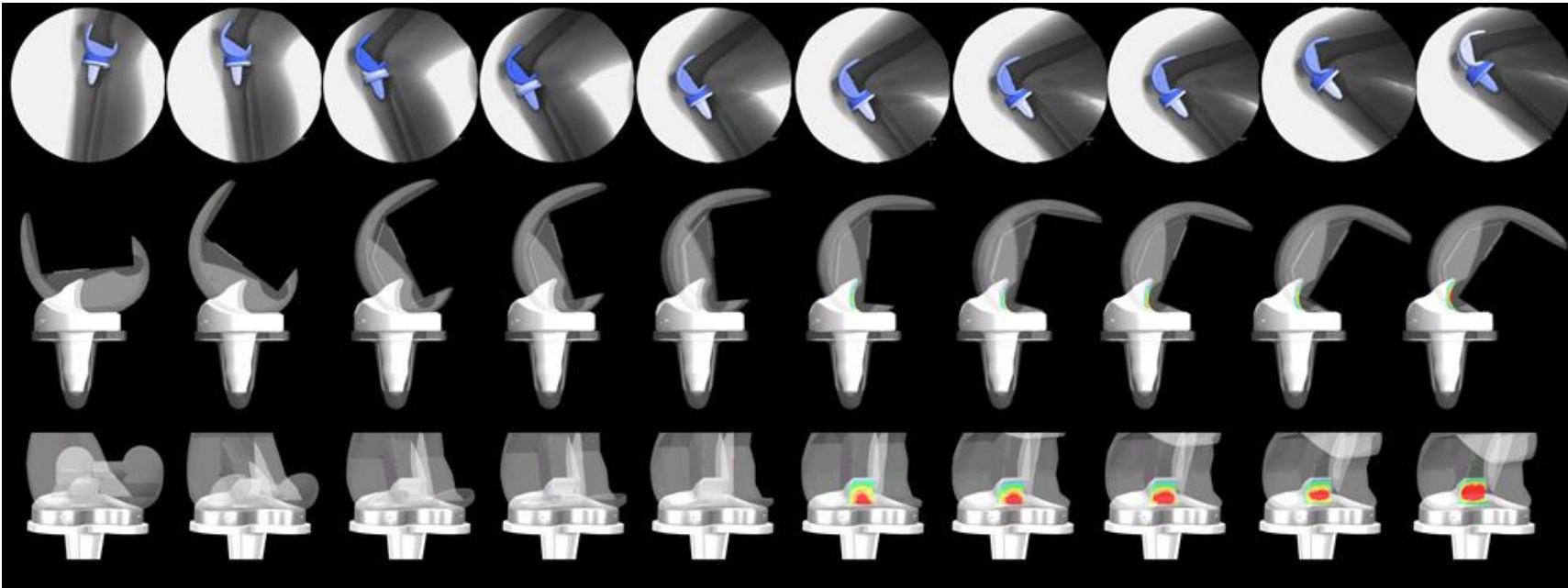
**Stabilność bez związania**

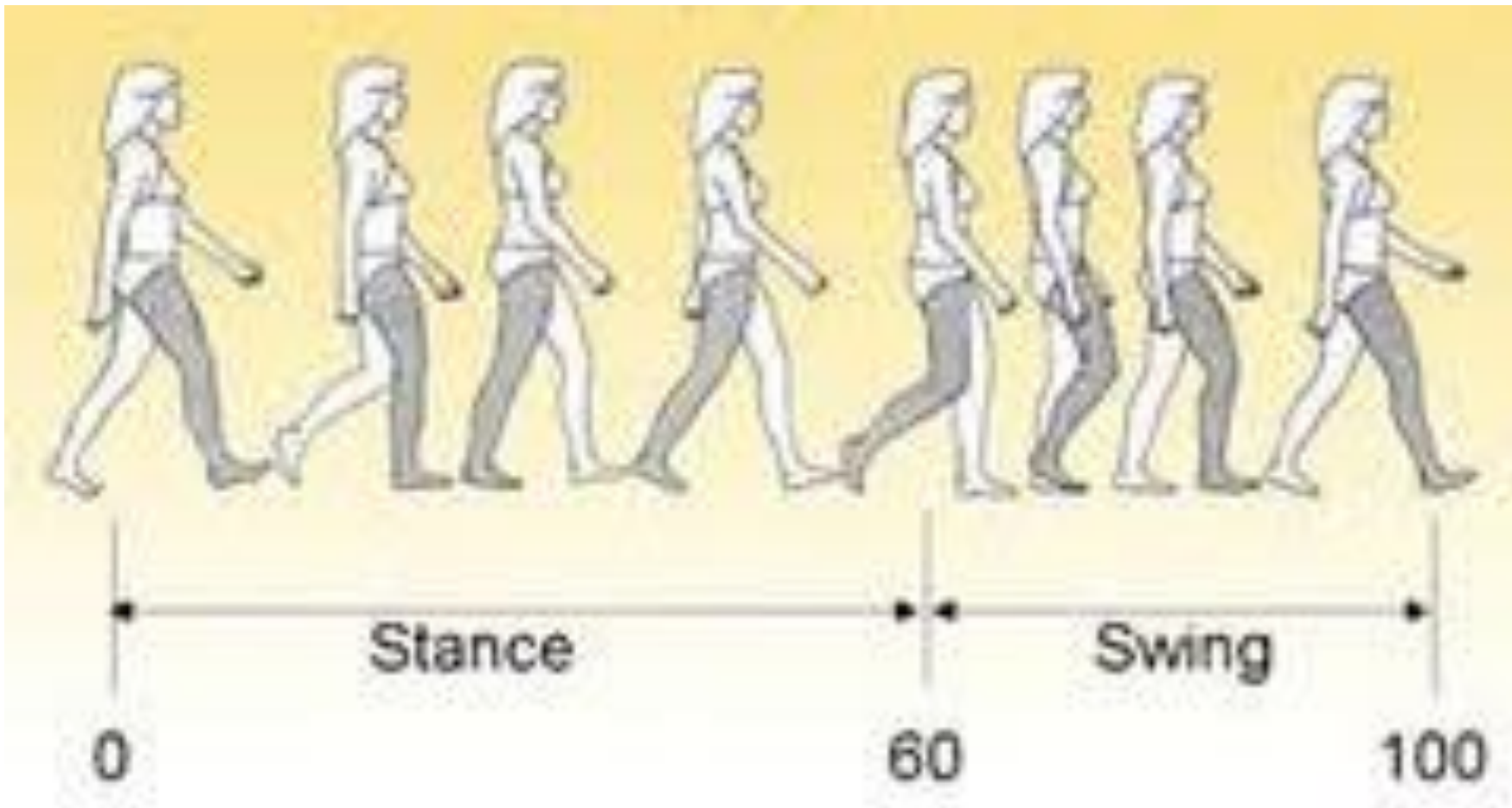
**Modularność**

**Materiał**

**Przyjazne instrumentarium**



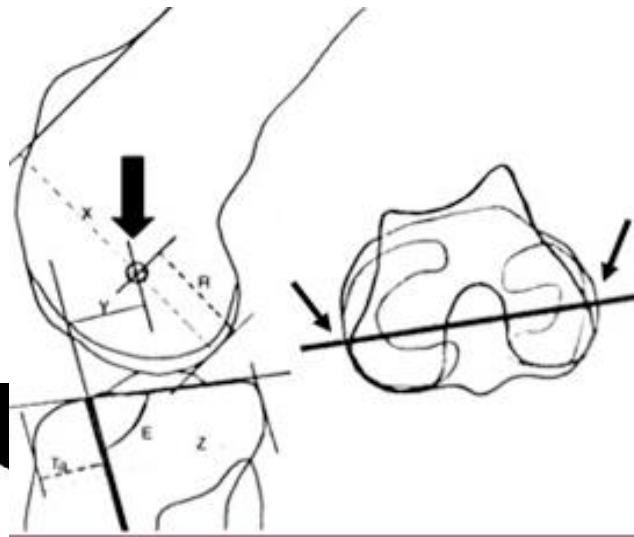




**Klinika Ortopedii i Chorób Zapalnych Narządu Ruchu CMKP**

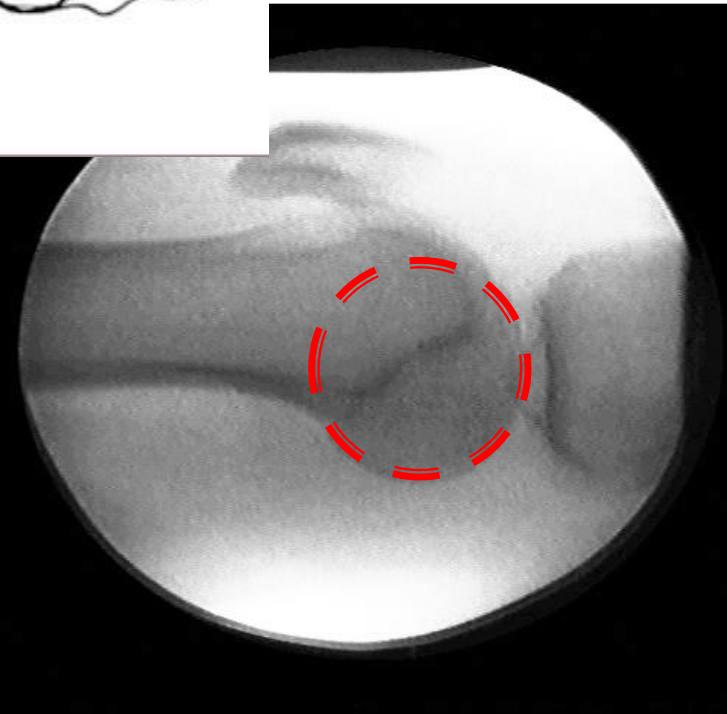
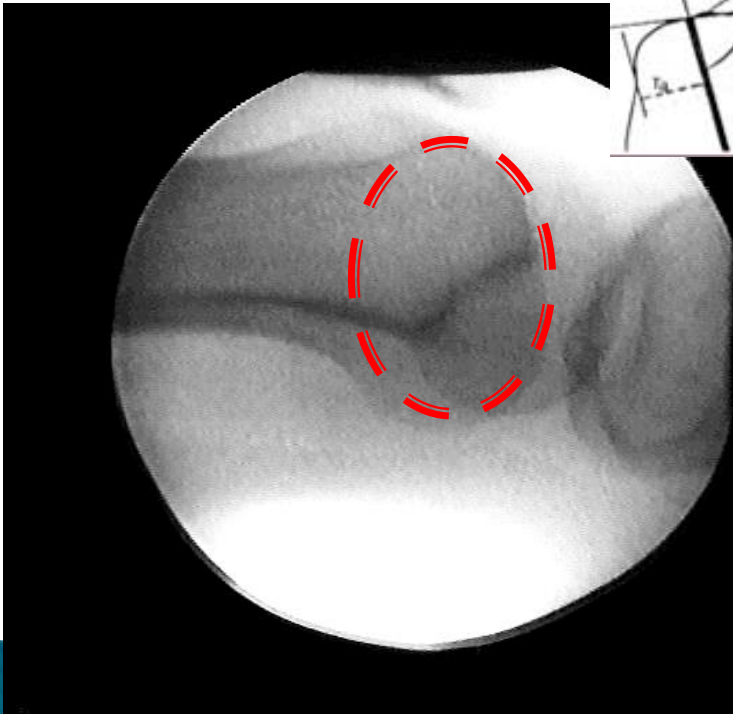
# KINEMATYKA

FICK 1911  
HOLLISTER i wsp. 1993



# IMPLANTU

JEDNOOSIOWOŚĆ



Klinika Ortopedii i Chorób Zapalnych Narządu Ruchu CMKP

# ... a oto wynik

**WIELOOSIOWOŚĆ**

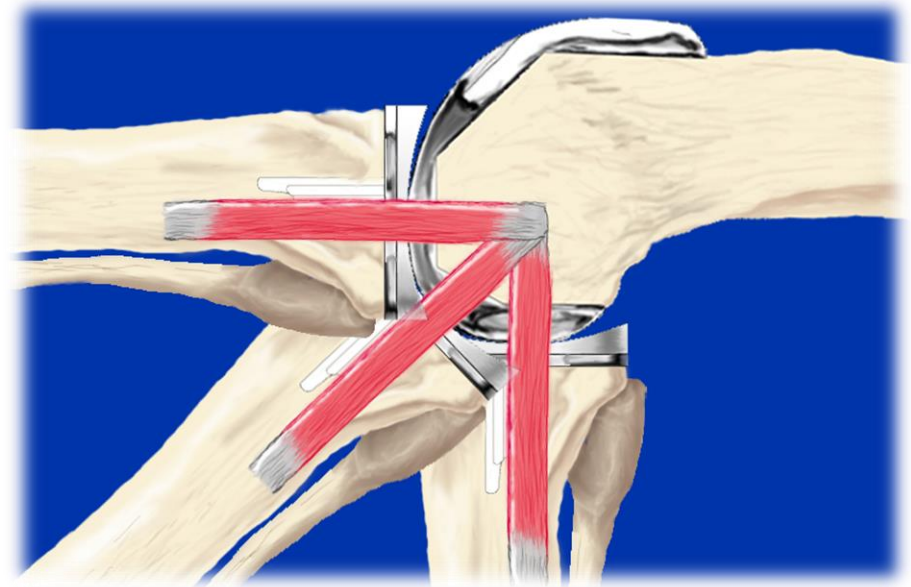
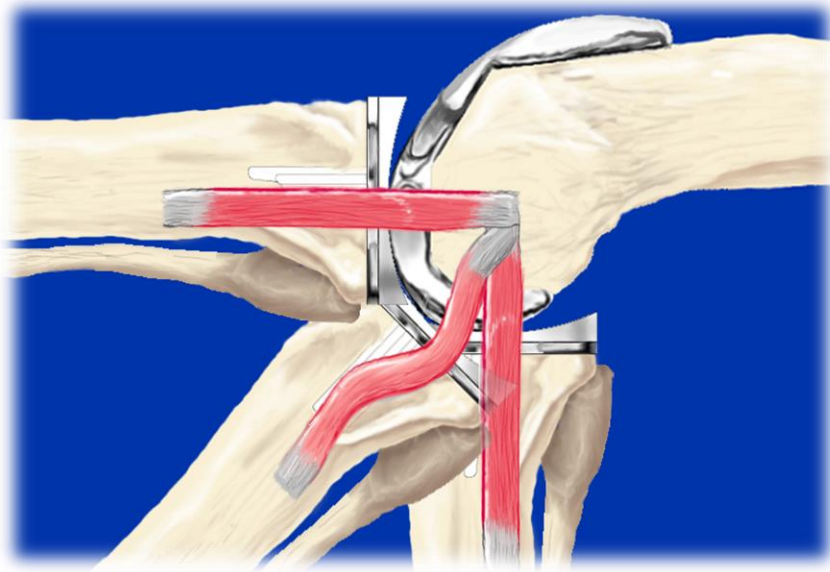


**JEDNOOSIOWOŚĆ**



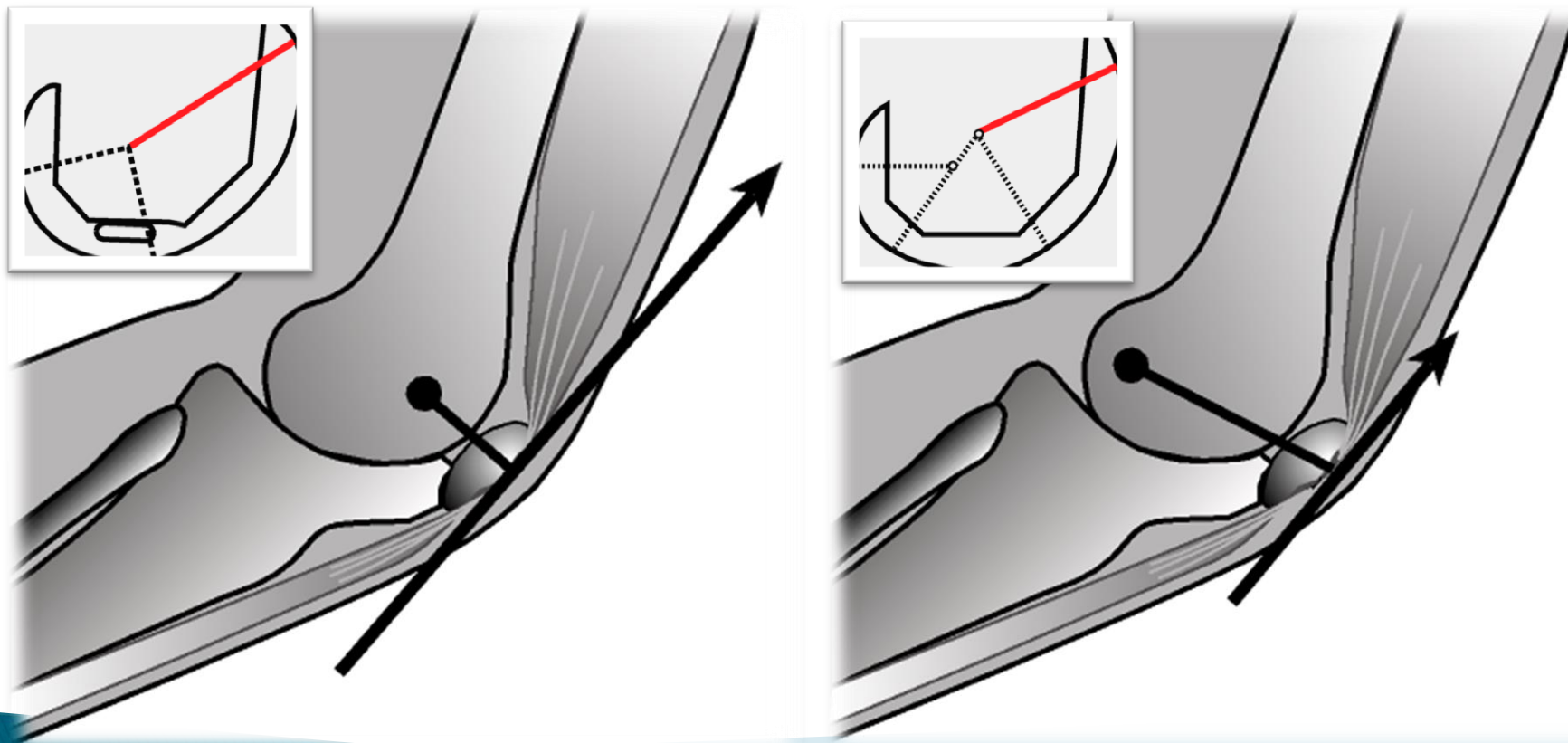
**Klinika Ortopedii i Chorób Zapalnych Narządu Ruchu CMKP**

# więzadła poboczne





# lokalizacja osi obrotu, a działanie mięśnia czworogłowego



# Typy endoprotez kondylarnych

**fix bearing**



**PS**



**CR**



**CS**



**mobile bearing**



**PS**

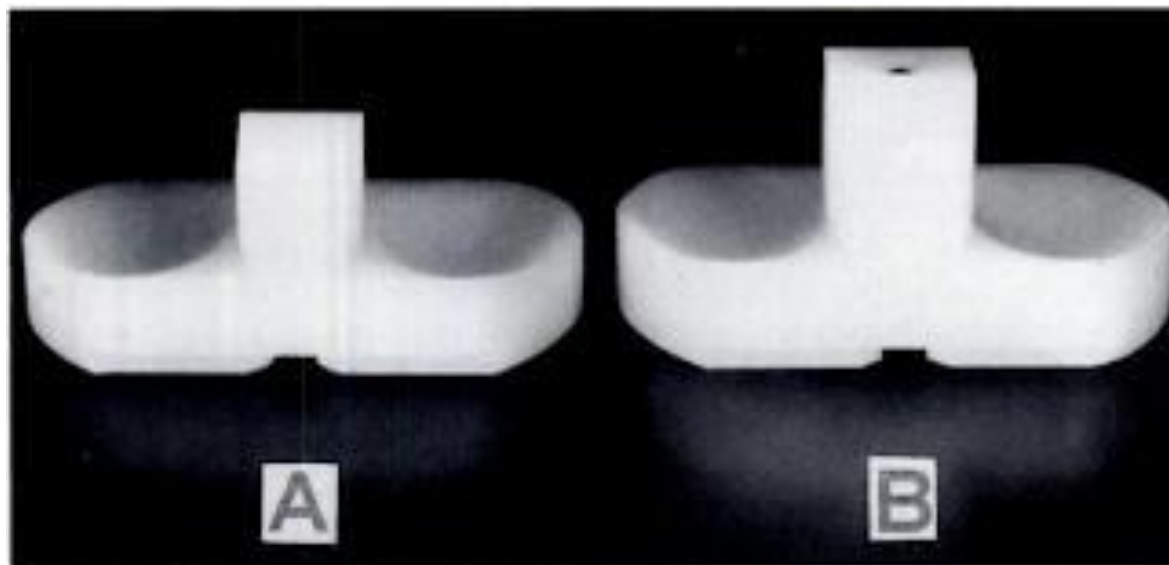


**CR**

# TYPY PŁYTKI PS

**PS**

**TS**



# STABILNOŚĆ BEZ ZWIĄZANIA



**Klinika Ortopedii i Chorób Zapalnych Narządu Ruchu CMKP**

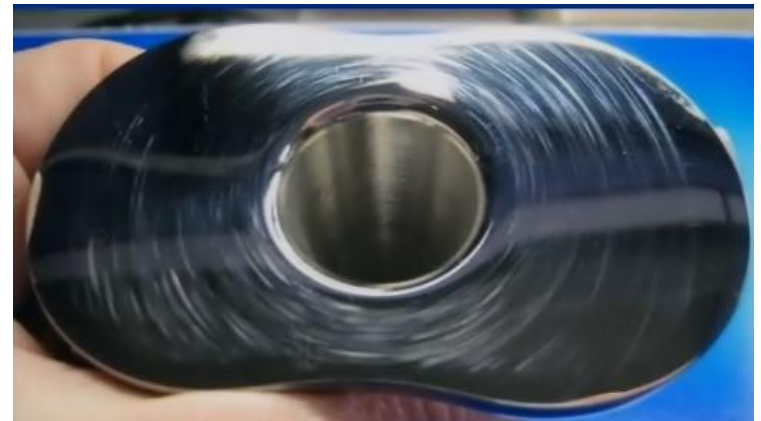
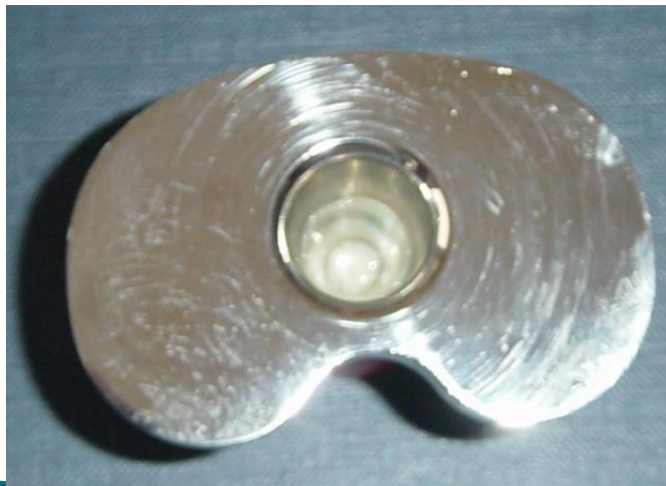
# **Inna technika operacyjna**

**CR - często wymaga poluzowanie PCL, jest ciaśniej w zgięciu niż w wyproście**

**PS – jest ciaśniej w wyproście niż w zgięciu – pamiętaj o wycięciu tylnych kłykci i uwolnieniu tylnej torebki stawowej**

**MB - precyzja w balansie tkankowym, mniejszy rozmiar poli (spin out)**

# METAL



**Klinika Ortopedii i Chorób Zapalnych Narządu Ruchu CMKP**

**Oxynium-oksydowana  
zirkonia**



**TiN – azotek tytanu**



**chrom/kobalt**



**Biolox delta**



**AS multi-layers coating  
ZrN (azotek zirkonii)**

# POLIETYLEN



**Klinika Ortopedii i Chorób Zapalnych Narządu Ruchu CMKP**



# MODULARNOŚĆ

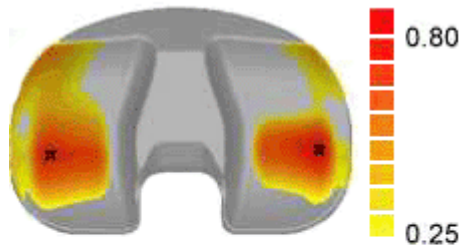


**Klinika Ortopedii i Chorób Zapalnych Narządu Ruchu CMKP**

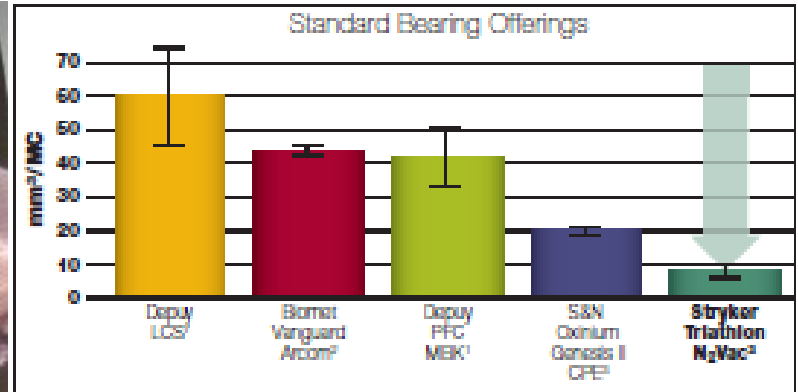
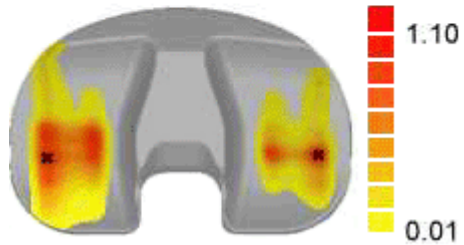
# MATERIAŁ



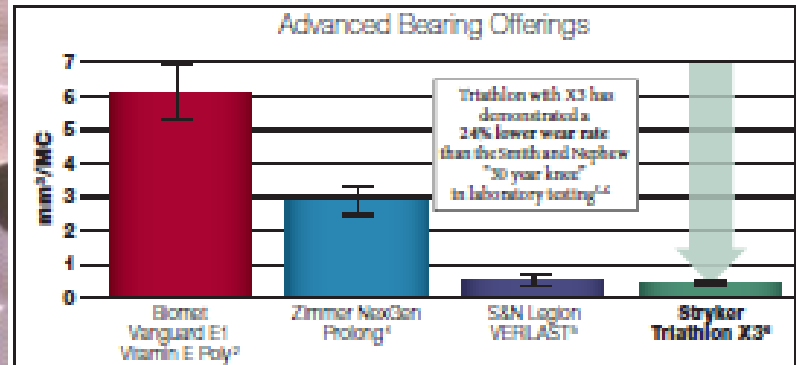
## Actual Wear



## Simulated Wear



The design of the Triathlon Knee enables better wear performance even when using a standard bearing surface.



Reported wear data shows that Triathlon with X3 demonstrates a 93% to 24% reduction in wear rate when compared to other advanced offerings.

# PRZYCZYNY OBLUZOWAŃ IMPLANTÓW

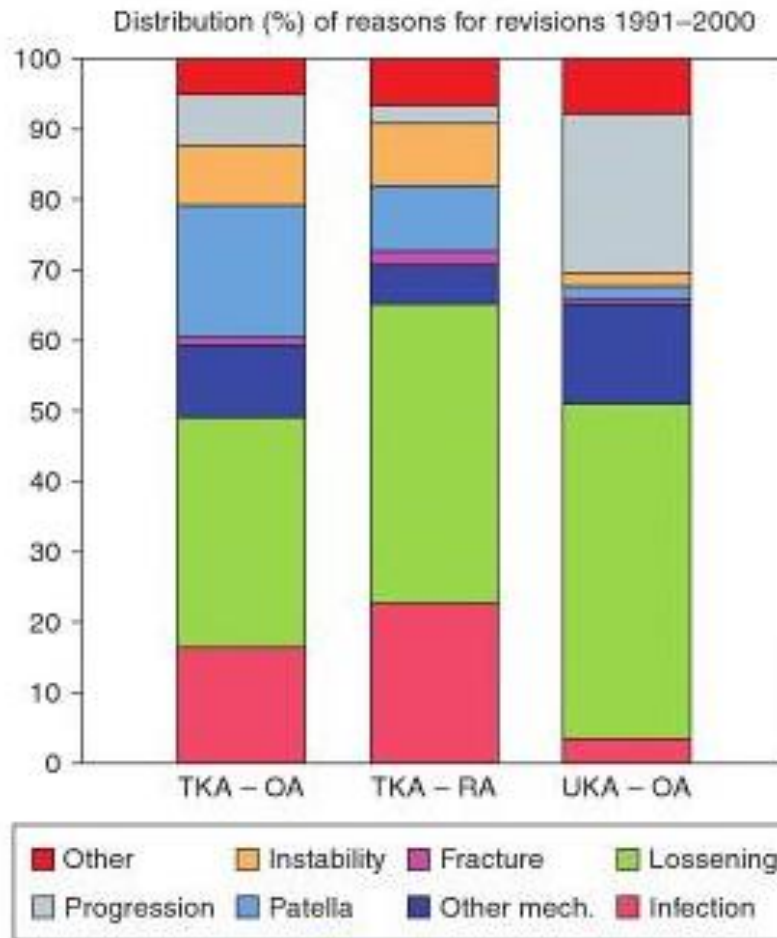


FIGURE 8.10 Reasons for knee arthroplasty revision from the Swedish National Knee Arthroplasty Register [74]. Reprinted with permission.



**TABLE 8.3** Summary of Osteolysis Studies for TKA

Study	Prosthesis design	Fixation	Mean follow-up	Incidence of osteolysis in study population	Osteolysis diagnosis	Incidence of revisions for osteolysis
Peters [46]	Synatomic & Arizona (DePuy)	Cementless	3.5y	27/174 (16%)	Radiographs	15/27 (56%)
Cambadi [53]	AMK (DePuy) & PCA (Howmedica)	Cementless	2.6y	30/271 (11%)	Radiographs	18/30 (60%)
Ezzet [47]	AMK (DePuy)	Cemented tibia, Cemented and cementless femur	4.7y	17/83 (20%) overall; 0/12 (0%) cemented, no screws; 14/46 (30%) cemented tibia with screws and uncemented femur	Radiographs	NA
Kim [54]	PCA (Howmedica)	Cementless	>7y	54/60 (90%) tibia; 48/60 (80%) patella; 0/60 (0%) femur	Radiographs	6/48 patellae (13%)
Robinson [55]	Posterior stabilized (65%), constrained implant (30%)	Cemented and cementless	4.7y	Not studied (revisions only)	Radiographs	17/185 (9%)
Whiteside [48]	Ortholoc II and Ortholoc Modular, short and long stem (Wright Medical)	Cementless	3–7y (Ortholoc II) and 2–4y (Ortholoc Modular)	0/675 Ortholoc II; 28/124 (23%) Ortholoc Modular with long stem; 19/112 (17%) Ortholoc Modular with short stem	Radiographs	2/47 Ortholoc Modular (4%)
Mikulak [56]	Posterior stabilized	Cemented	4.7y	Not studied (revisions only)	Radiographs	16/557 (2.9%)
Spicer [51]	PFC (Johnson & Johnson)	Cemented and cementless	6y	29/751 (3.9%)	Radiographs	11/751 (1.5%)
Huang [49]	LCS (DePuy), PCA (Howmedica), Miller-Gallante (Zimmer), Tricon (Smith & Nephew)	Cemented and cementless	8y	Not studied (only revisions due to wear and osteolysis studied)	Radiographs and intraoperative observations	16/34 (47%) mobile bearing group; 6/46 (13%) fixed bearing group
O'Rourke [50]	IB II (Zimmer)	Cemented	6.4y	17/105 (16%)	Radiographs	2/17 (12%)
Weber [52]	AOC (Biome8)	Cemented	6.3y (Monoblock design), 5.5y (Modular design)	40/698 (5.7%) Monoblock design; 73/353 (20.7%) Modular design	Radiographs	1/40 (2.5%) Monoblock design; 6/73 (8.2%) Modular design

# OSTEOLIZA

# **PRZYJAZNE INSTRUMENTARIUM**

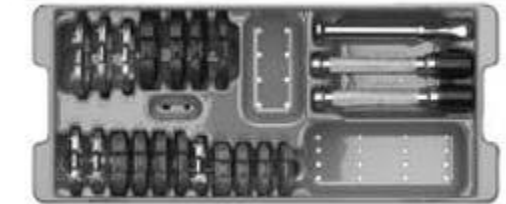
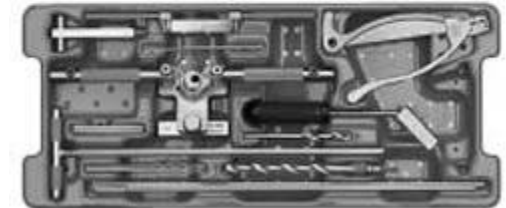
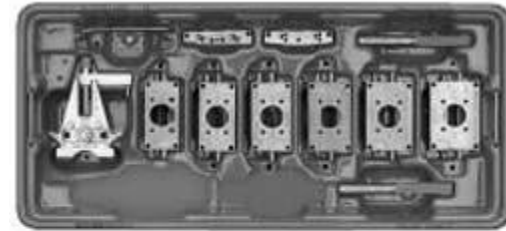
**instrumentarium, które można rozwijać**

**proste - unika się błędów**

**powtarzalna technika**

**„leżące” w ręku**

**lubiane przez instrumentariuszkę**





**DZIEKUJĘ,  
ZA UWAGĘ**

**WYBIERZ SAM**