



**KOKSARTROZA VIII**

MIĘDZYNARODOWE SYMPOZJUM

Katowice, 21-23.04.2016



# MANAGEMENT OF PROXIMAL FEMORAL FRACTURES IN THE ELDERLY: FIXATION VS HEMIARTHROPLASTY VS BIPOLAR HEMIARTHROPLASTY VS TOTAL HIP REPLACEMENT

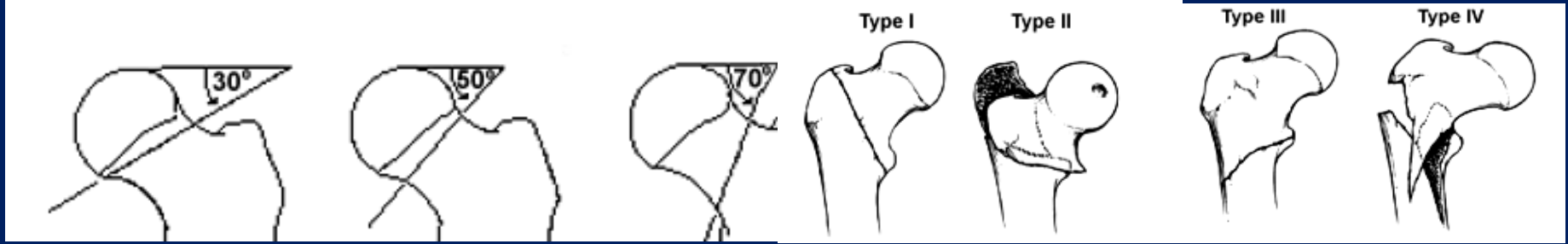
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- Patients with proximal femoral fractures are main group treated in orthopaedic wards [20-30% of all patients]. Usually, these patients are over 80 years old.
  - They remain a medical, economic, organizational and social problem
  - Analysis from 2008 to 2015:
    - Femoral neck fractures 405 ~50/year
    - Trochanteric fractures 463 ~58/year
-

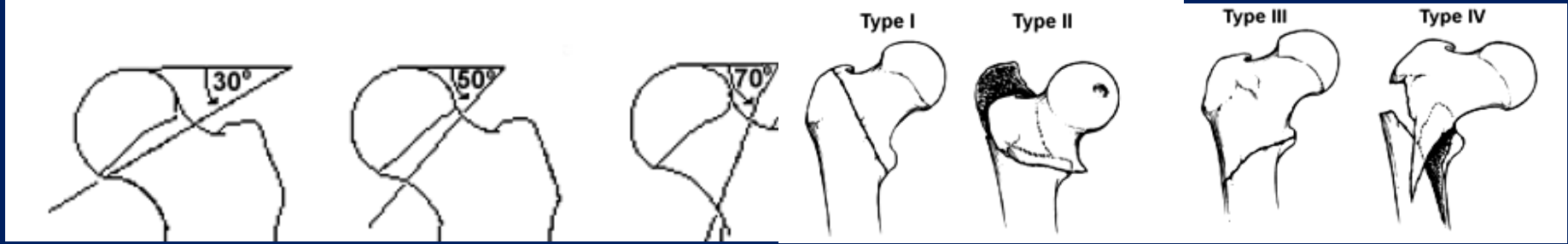
- Goal of treatment is:
  - to reduce the pain
  - to increase mobility
  - to reduce the time of immobilization
  - to reduce the time of hospitalization
  - to limit the risk of early and late intraoperative complications
  - to limit the risk of early and late postoperative complications

- Treatment should take into account also negative aspects of that type of fractures:
  - a) ~50% of patients are disabled because of fracture
  - b) after 1st fracture overall health status is permanently limited by 30%, and after another – by 70%
  - c) 1-year mortality rate is 20-30%
  - d) elderly patients over 90 years old survive from 4 to 13 months



When selecting the method of treatment, the following have to be taken into account:

- type of fracture, displacement level
- overall and local health status
- biological age
- progression of osteoporosis
  - additional factors impacting bone quality: orthopedical, cardiological, nephrological, rheumatological, neurological, oncological and metabolic



When selecting the method of treatment, the following have to be taken into account:

- local status of the skin, subcutaneous tissue and muscles
- neurological status
- blood supply status of the extremity
- immunity system status
- general health status

## FIXATION DRAWBACKS:

- PROLONGED REHABILITATION
- FREQUENT REVISION OPERATIONS
- ASEPTIC NECROSIS
- NONUNION
- IMPLANT MIGRATION
- SECONDARY MIGRATION

## ENDOPROSTHESIS DRAWBACKS:

- MORE DIFFICULT QUALIFICATION TO OPERATION
- LONGER LENGTH OF OPERATION
- MAJOR BLOOD LOSS
- POTENTIAL RISK OF WOUND INFECTION
- HIGHER PERIOPERATIVE MORTALITY

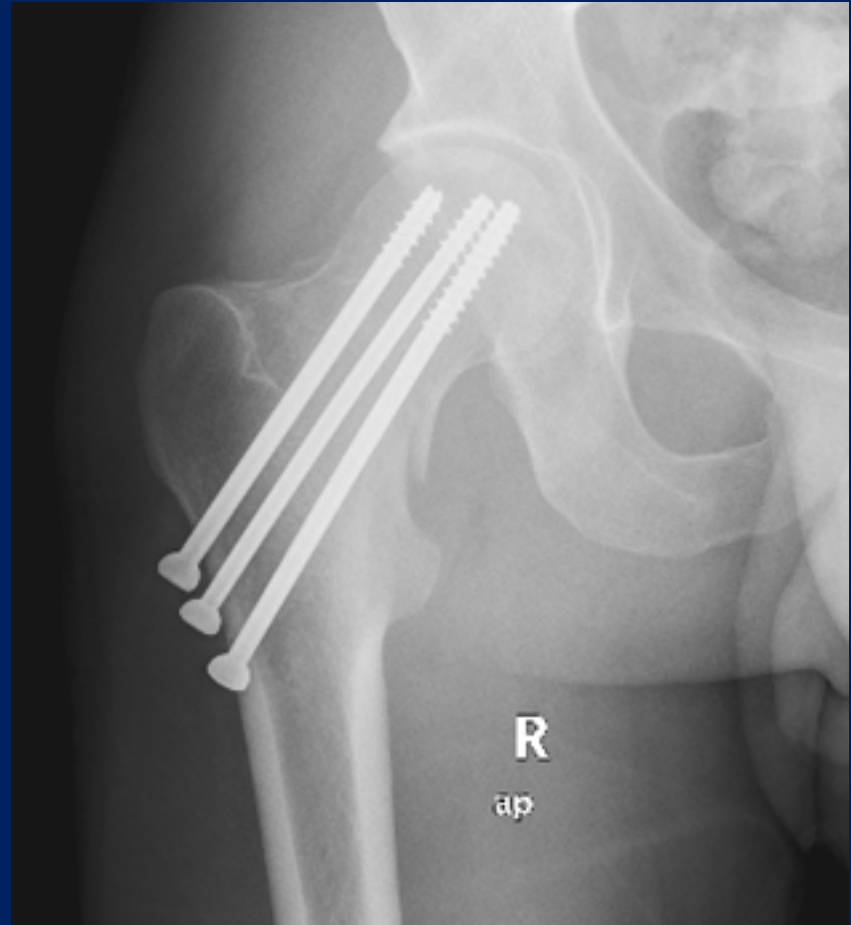


# FEMORAL NECK FRACTURE

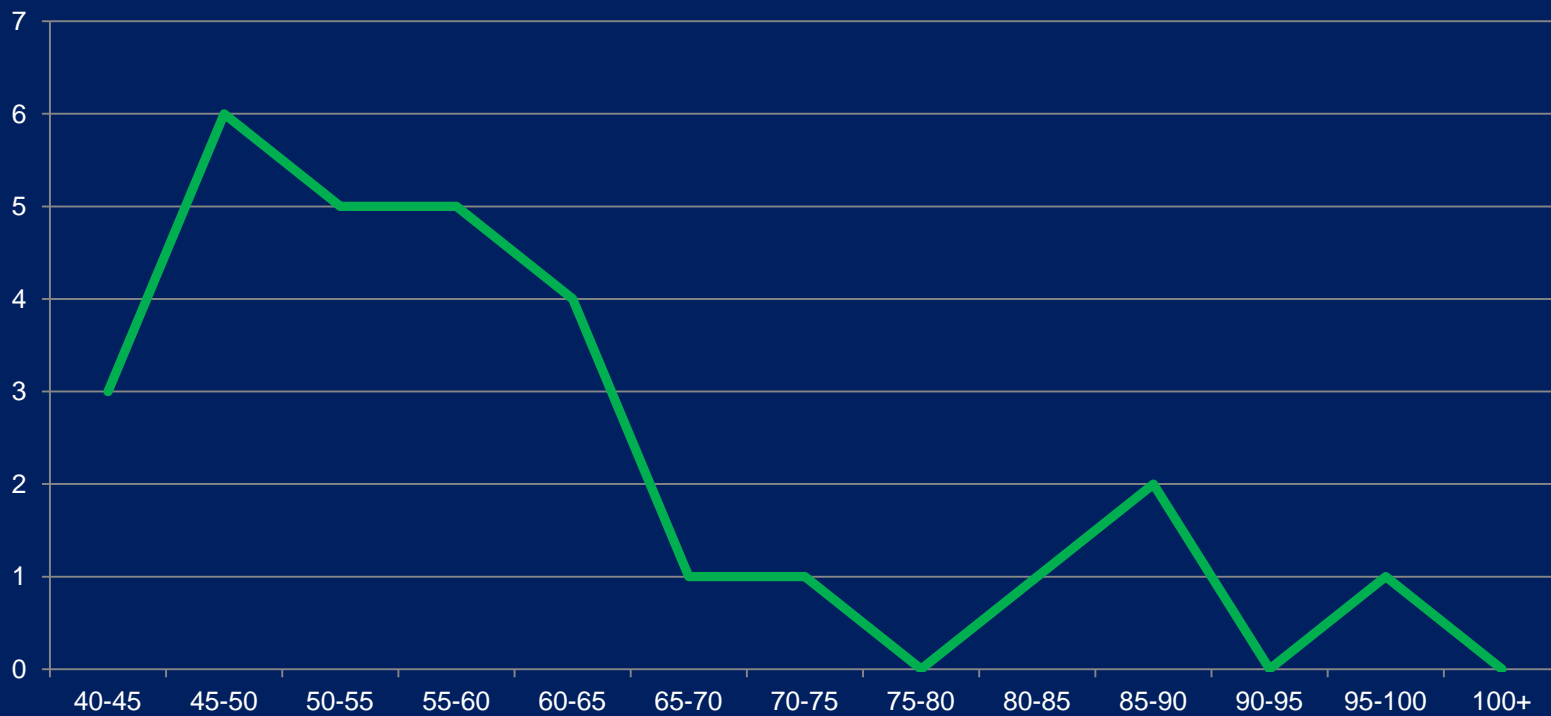
Screw fixation	45-60	25[6%]
Screw fixation	85-90	4[1%]
Cementless endoprosthesis	55-65	77[19%]
Hybrid endoprosthesis	65-70	4[1%]
Cemented endoprosthesis	70-90	176[44%]
Bipolar endoprosthesis	75-90	37[9%]
Austin-Moore hemiprosthesis	80-95	48[12%]
Gamma nail fixation	80-90	8[2%]
Disqualified	75-95	24[6%]
Death in preoperative period	2 [87lat w 2 dobie, 69lat w 5dobie]	

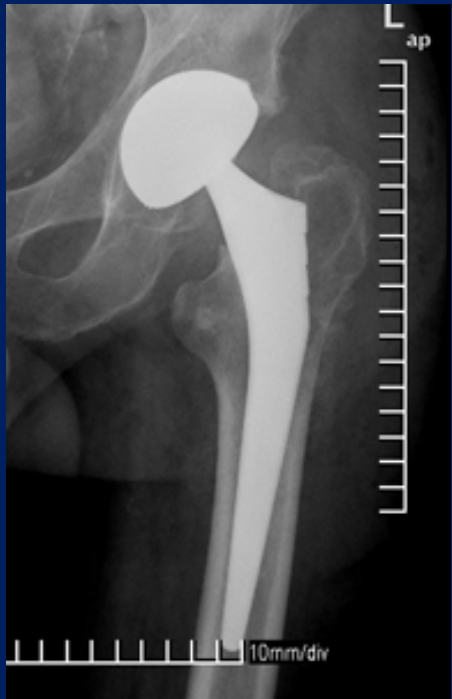
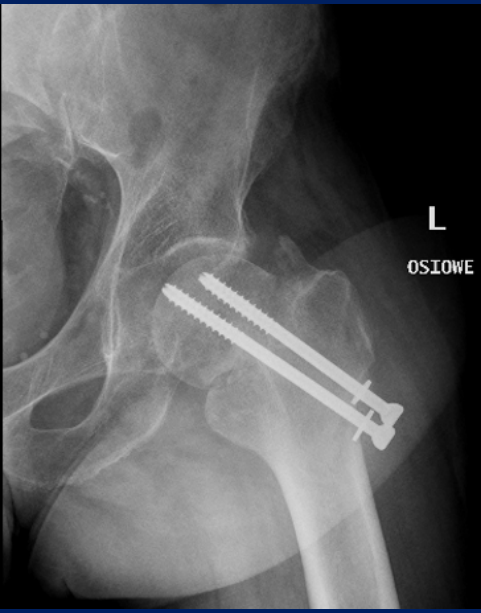
# Cannulated screw fixation

29 [7%] 45-60y/o 25patients [6%] 85-90y/o 4 [1%]



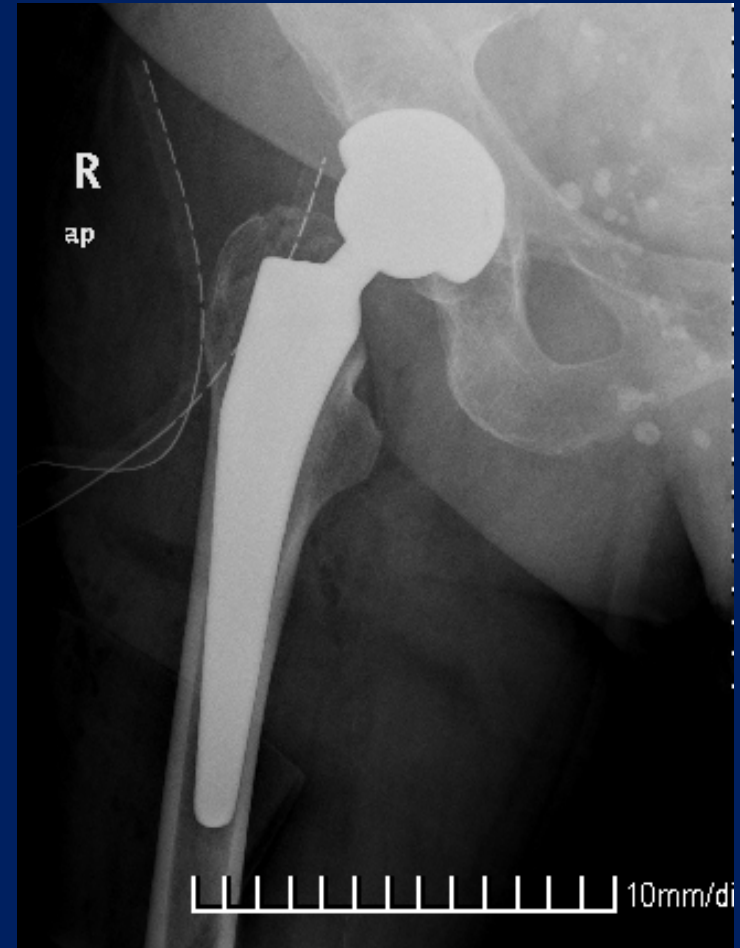
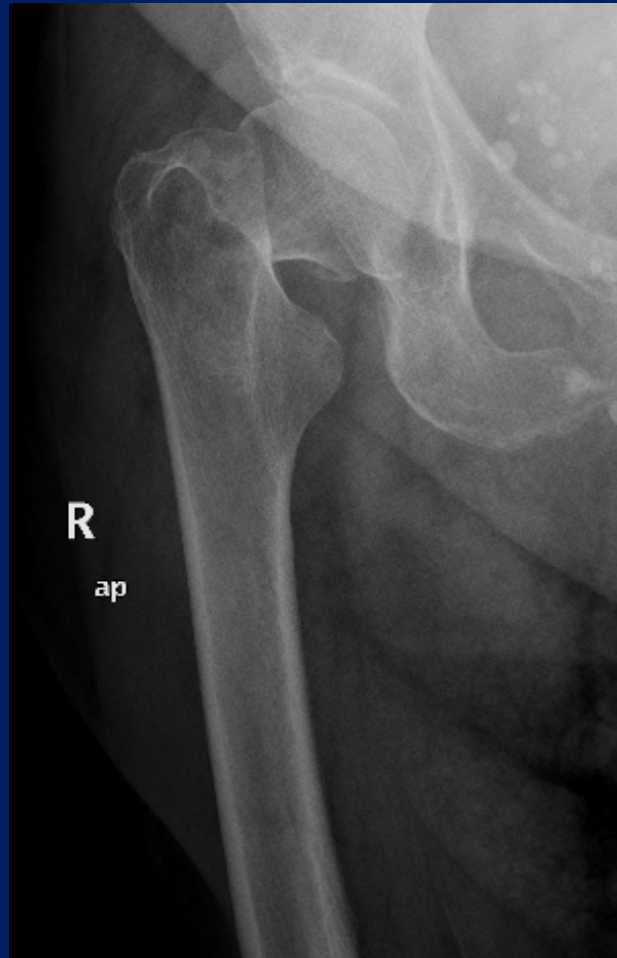
## Cannulated screws





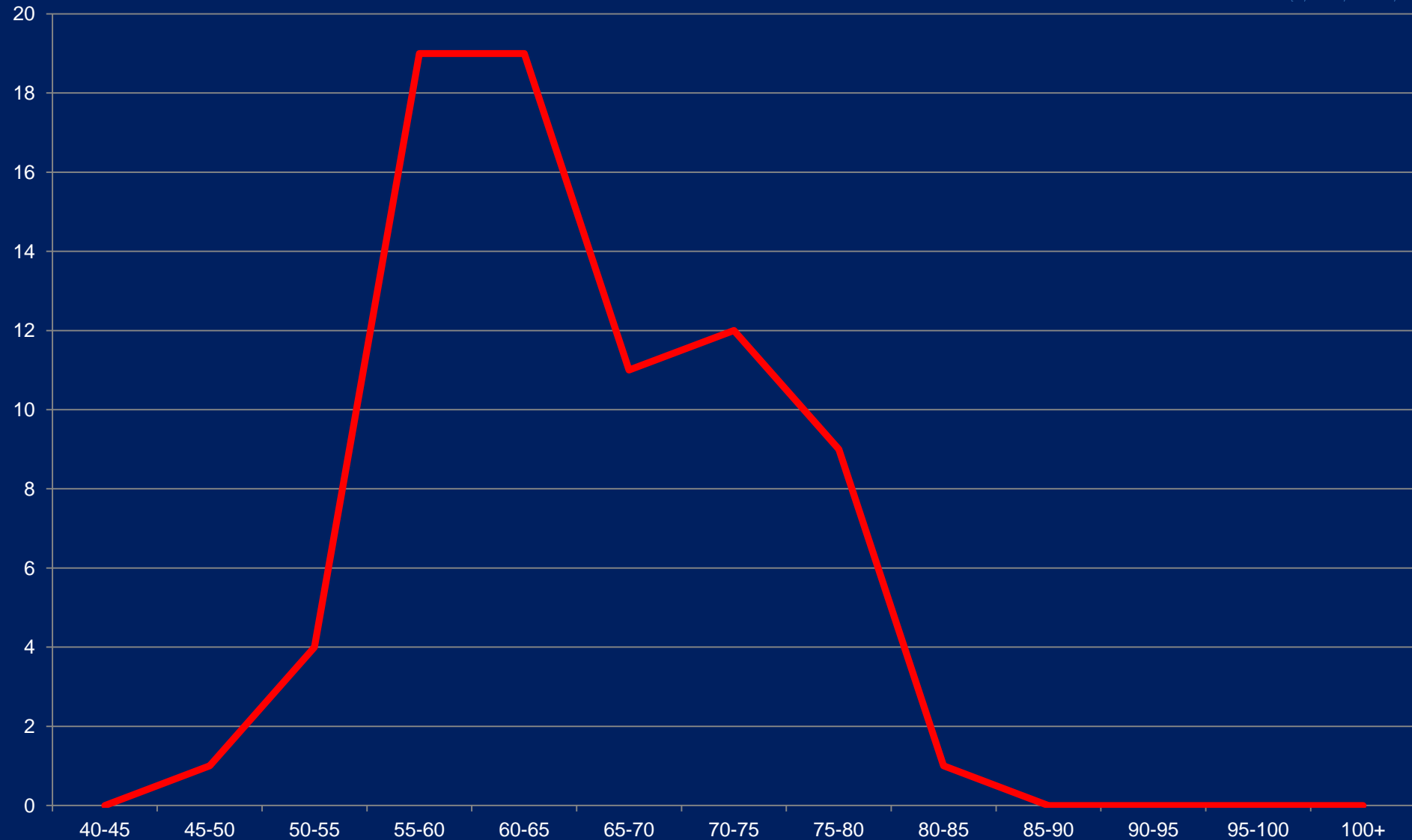
# Cementless endoprosthesis

55-65y/o 77[19%]





# Cementless endoprosthesis in femoral neck fractures

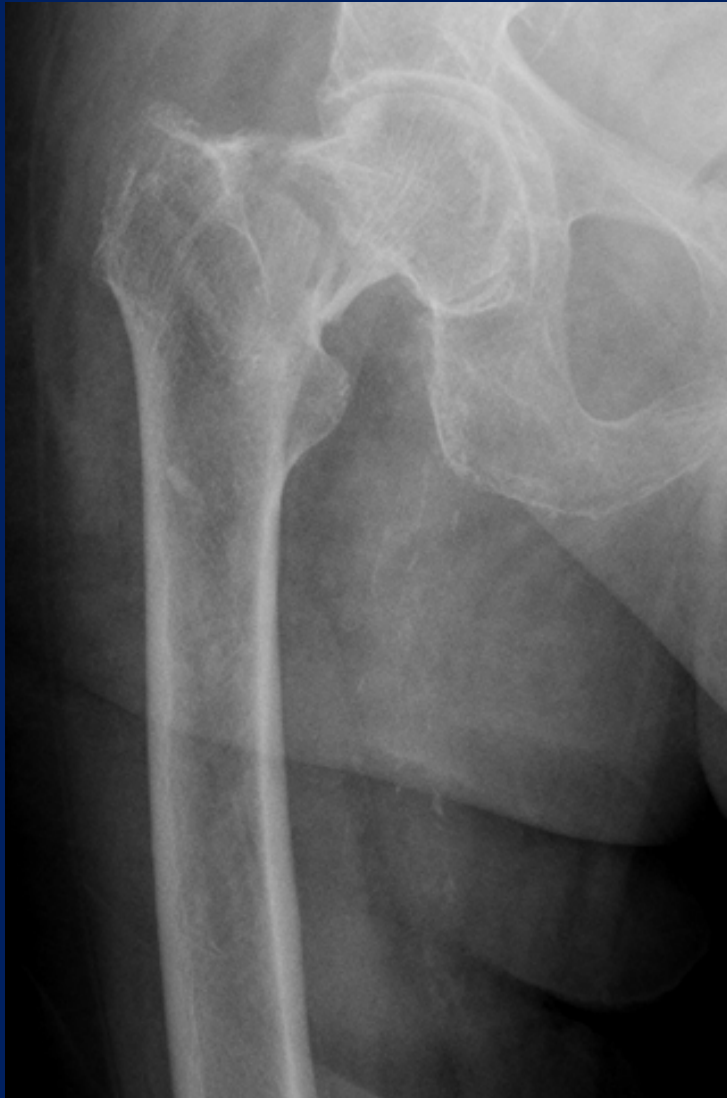


- ## Cementless endoprosthesis in femoral neck fractures
- Due to the fact that initial conditions are more difficult comparing to performed endoprosthesis caused by arthrosis, the quantity of complications is higher:
- ~6.2% periprostheses fracture
  - ~11.4%-14,3% endoprosthesis displacements
  - ~1,5% early loosening
  - ~10.9% reoperations

Cemented endoprosthesis

70-90y/o

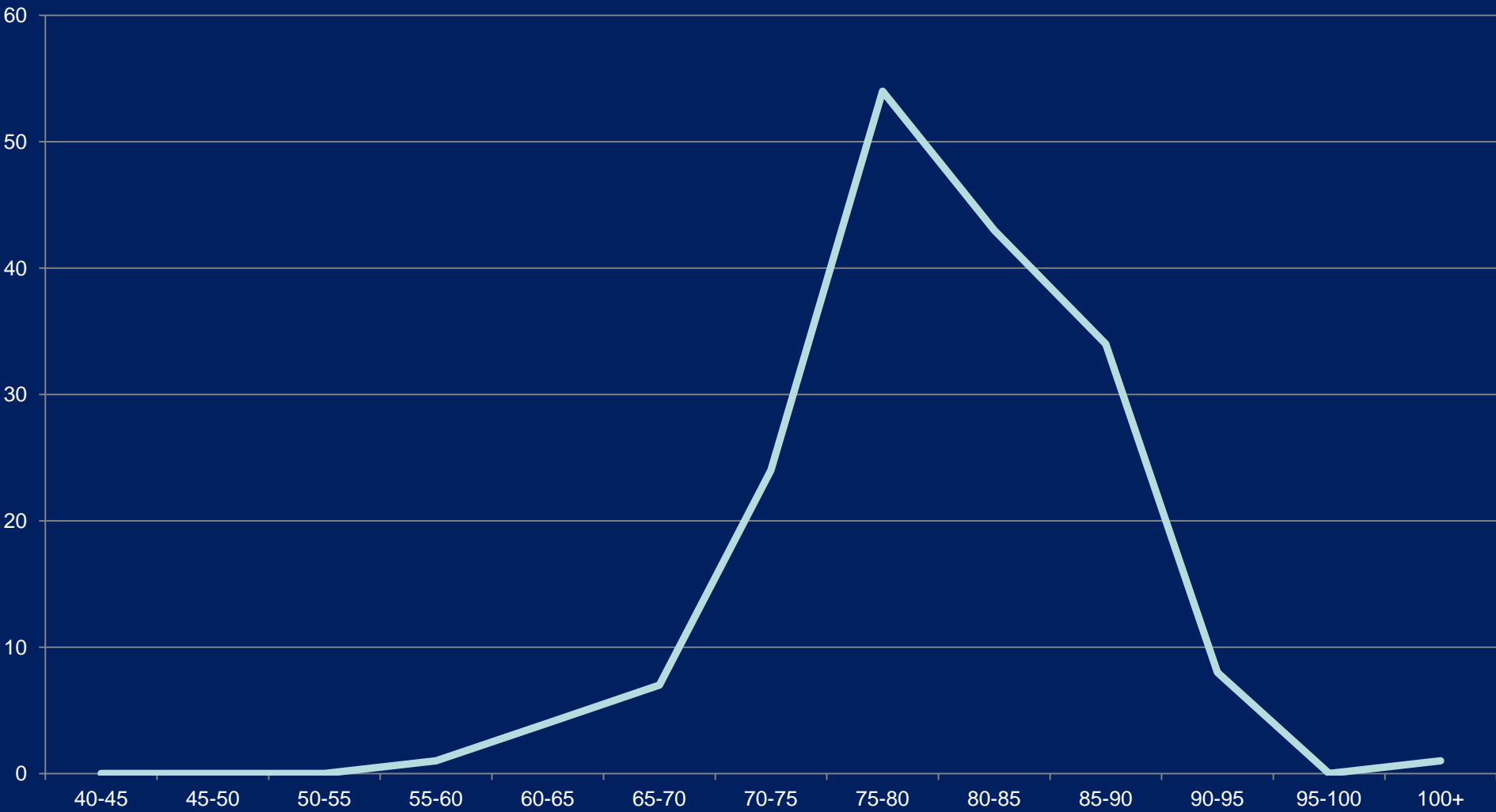
176[44%]





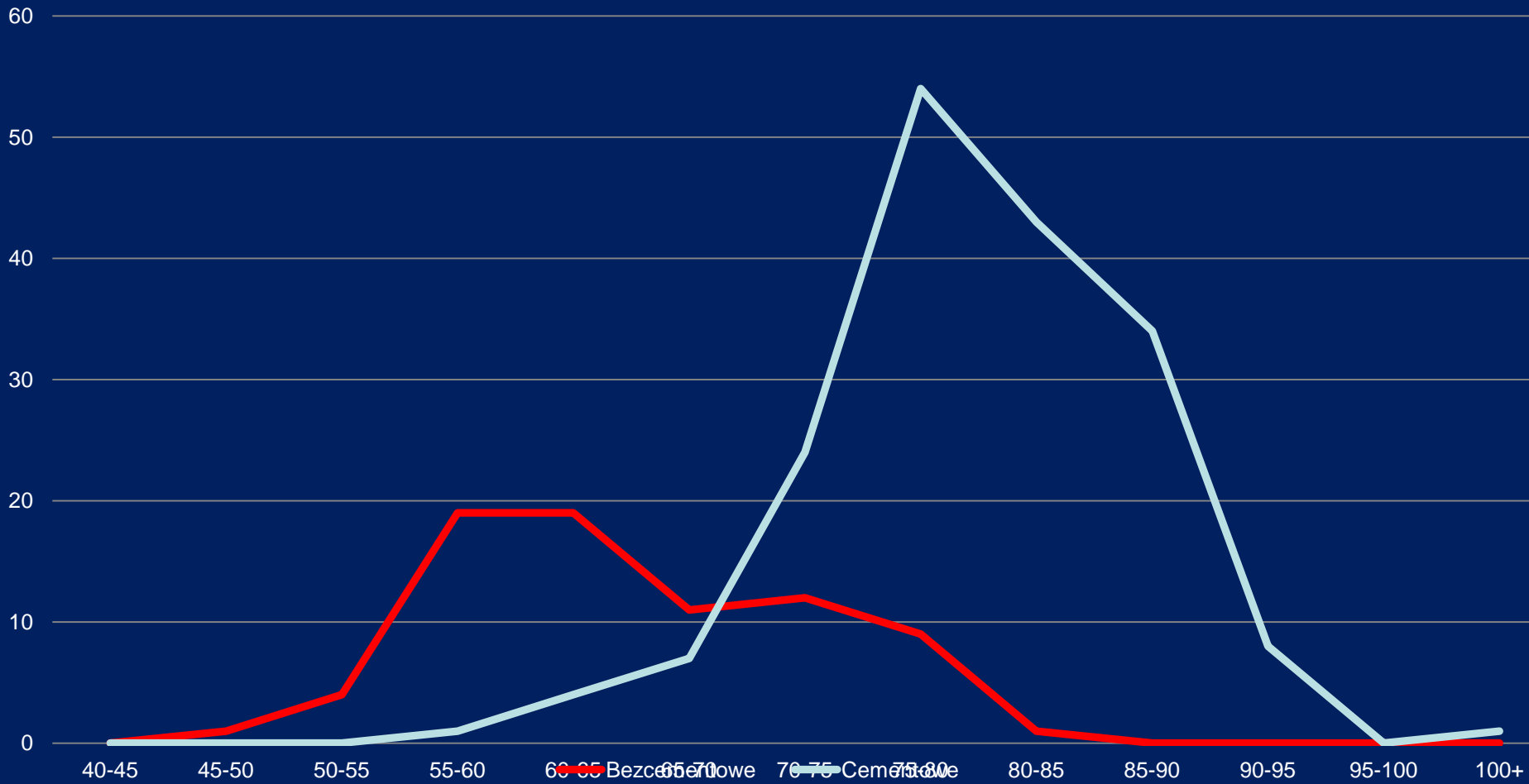


## Cemented endoprosthesis





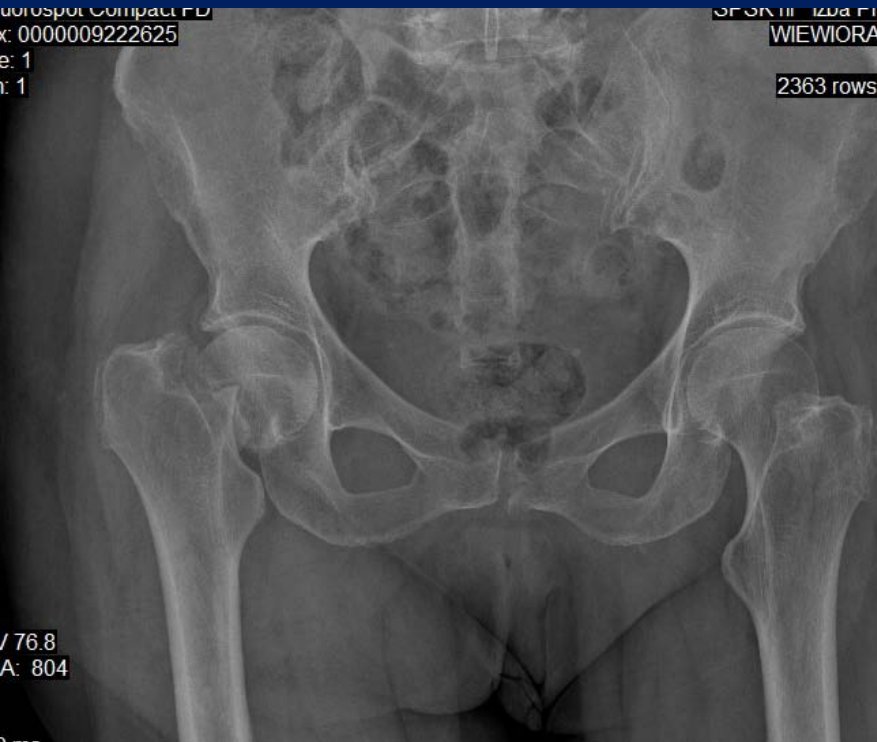
## Cementless and cemented endoprosthesis

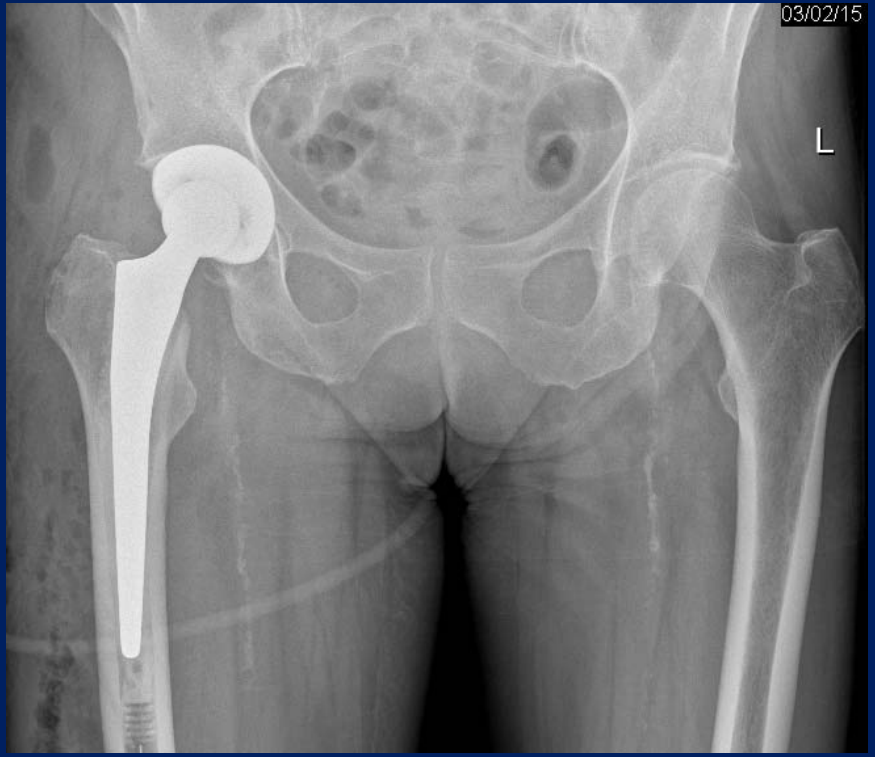


# Hybrid endoprosthesis

65-70 y/o

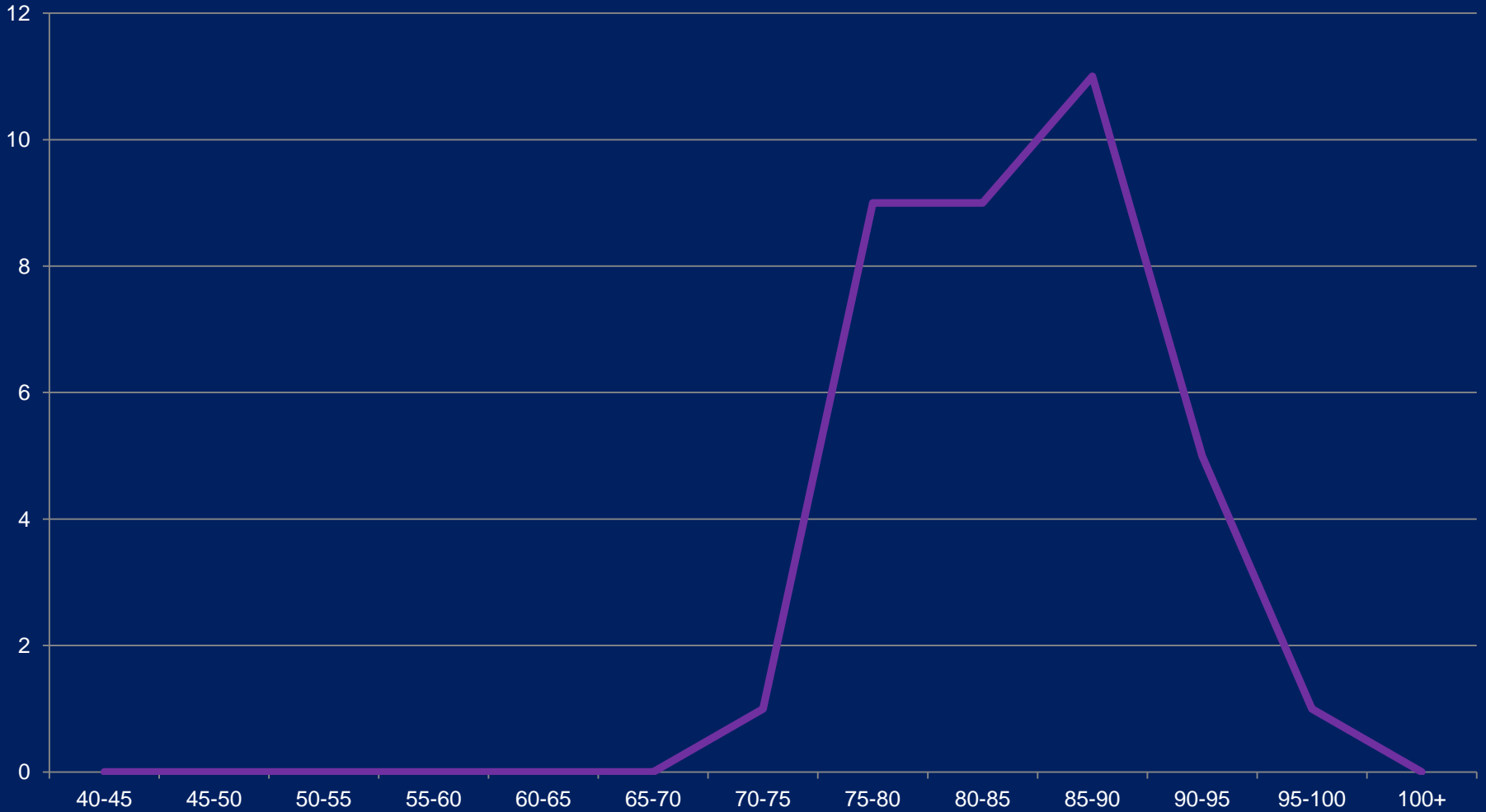
4[1%]







# Bipolar



# Hemiprosthesis - Austin-Moore's 80-95y/o 48[12%]





## Austin-Moore's hemiprosthesis





## Gamma nail in femoral neck fractures



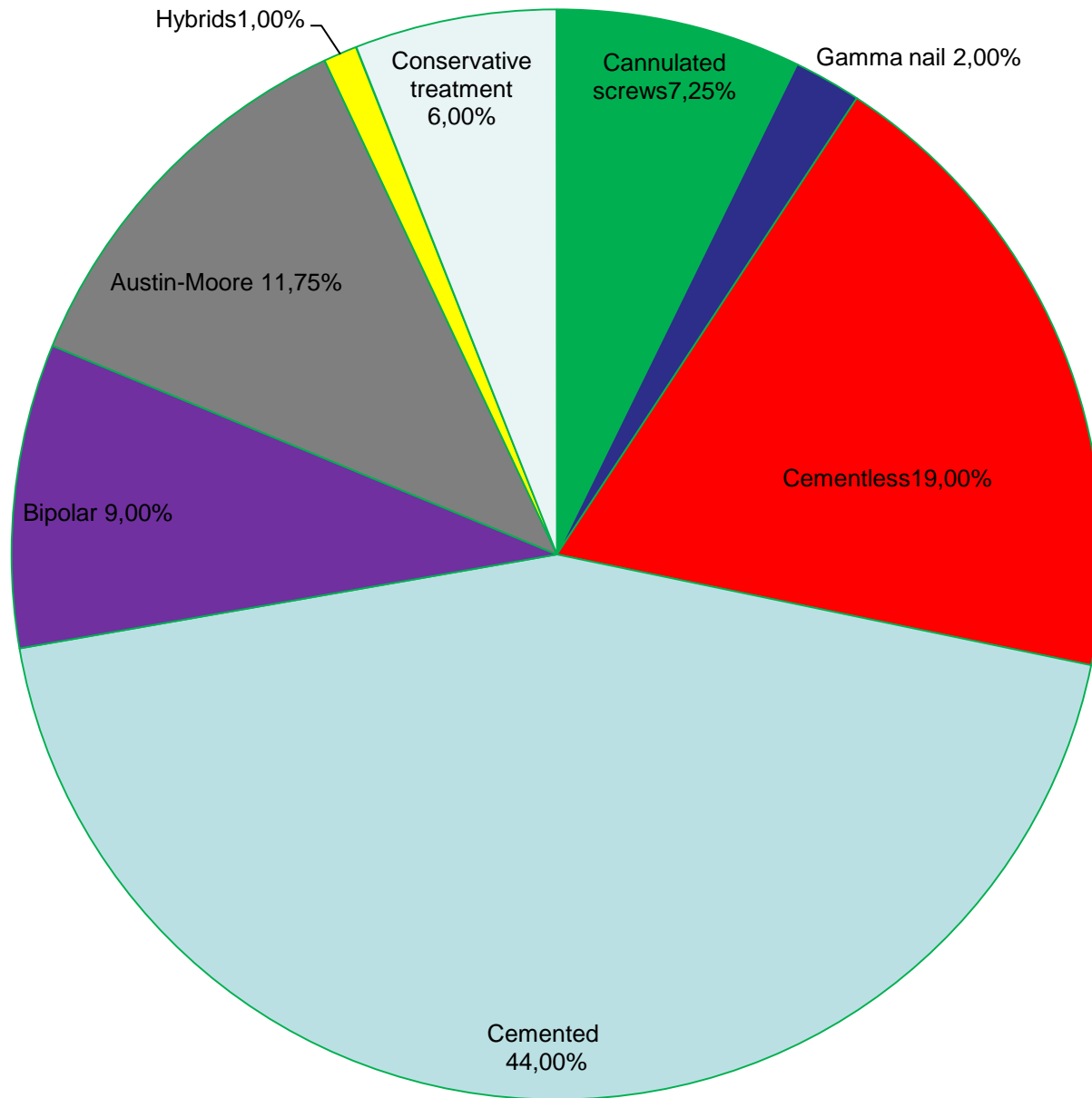


# Basicervical fracture fixed with Gamma nail

80-90 8 patients [2%]

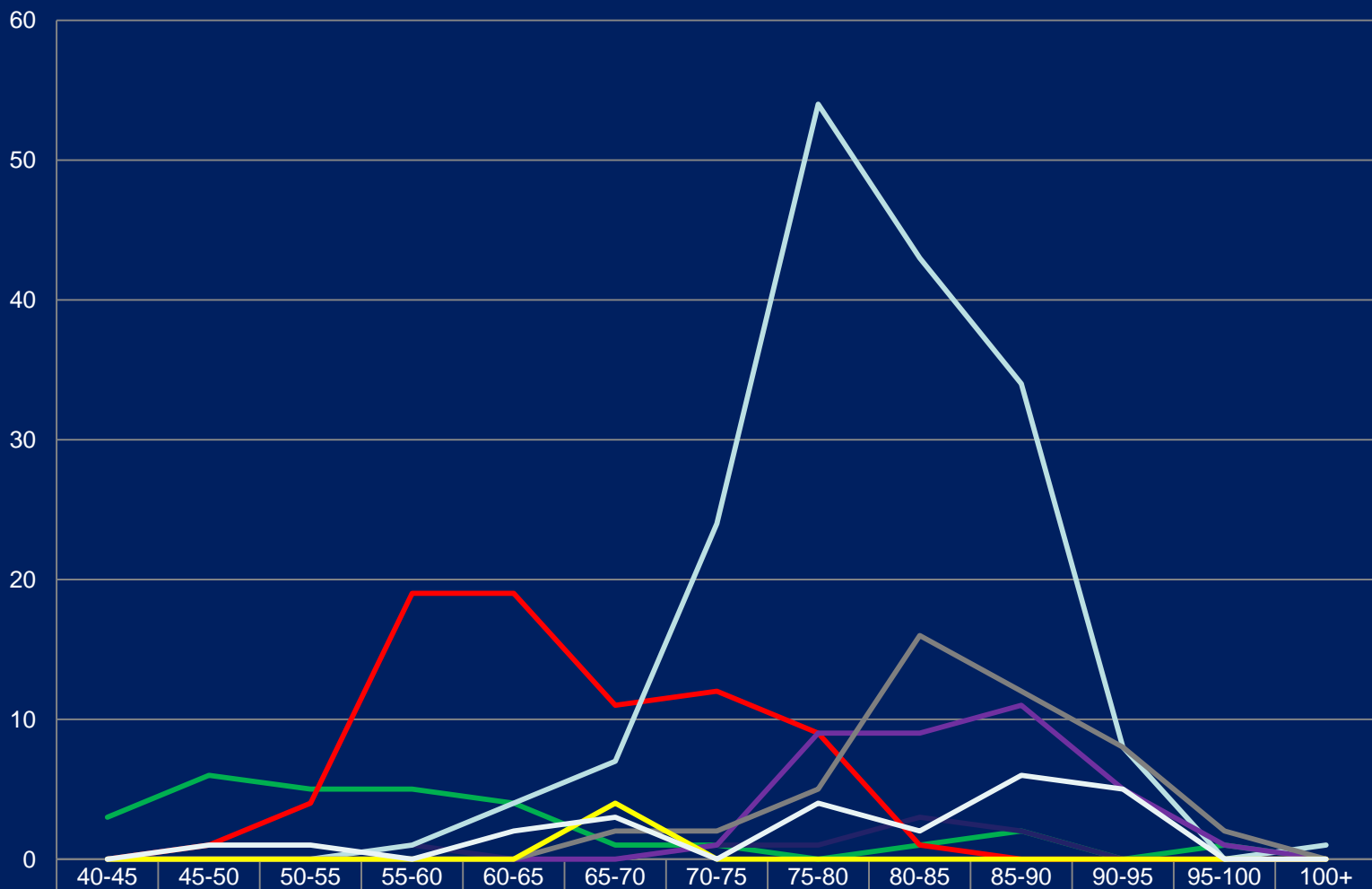








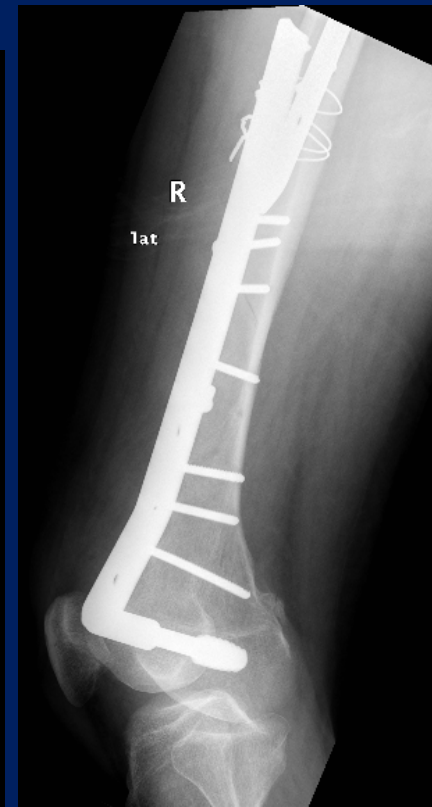
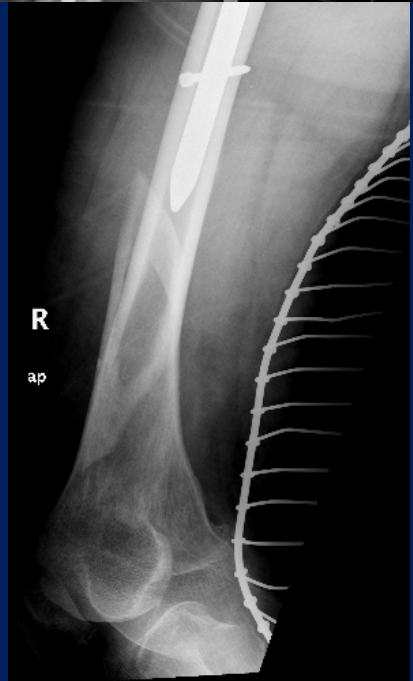
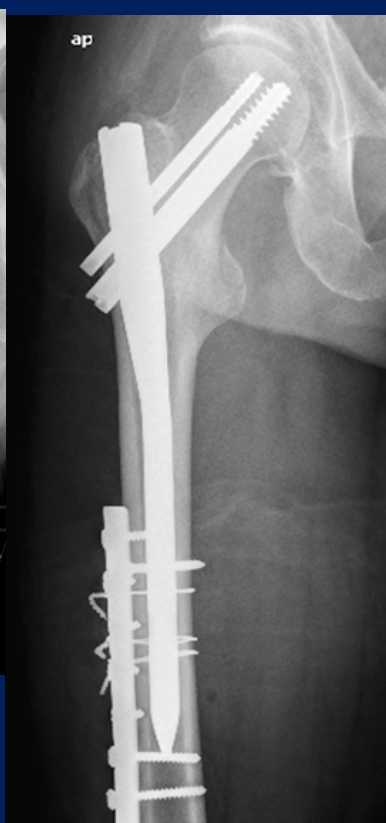
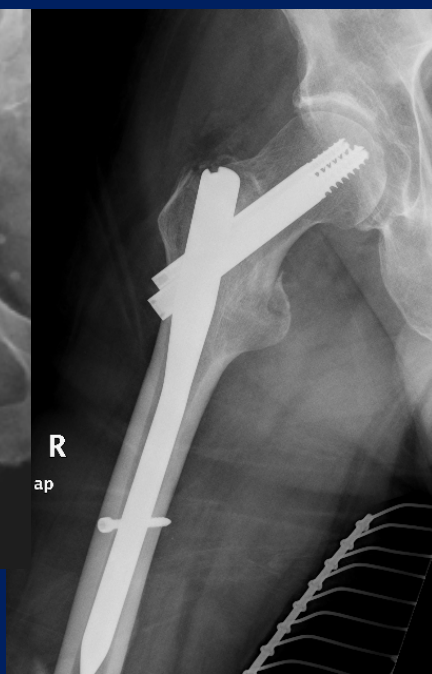
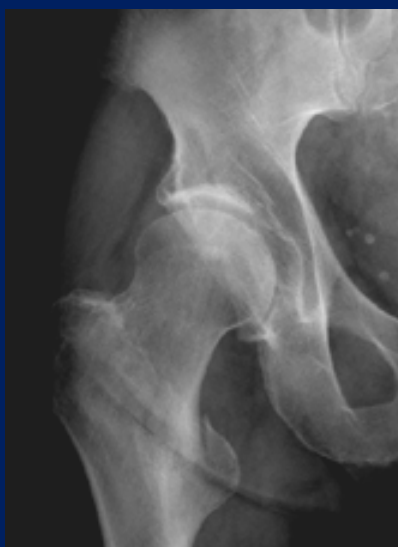
# All methods of treatment – femoral neck fractures

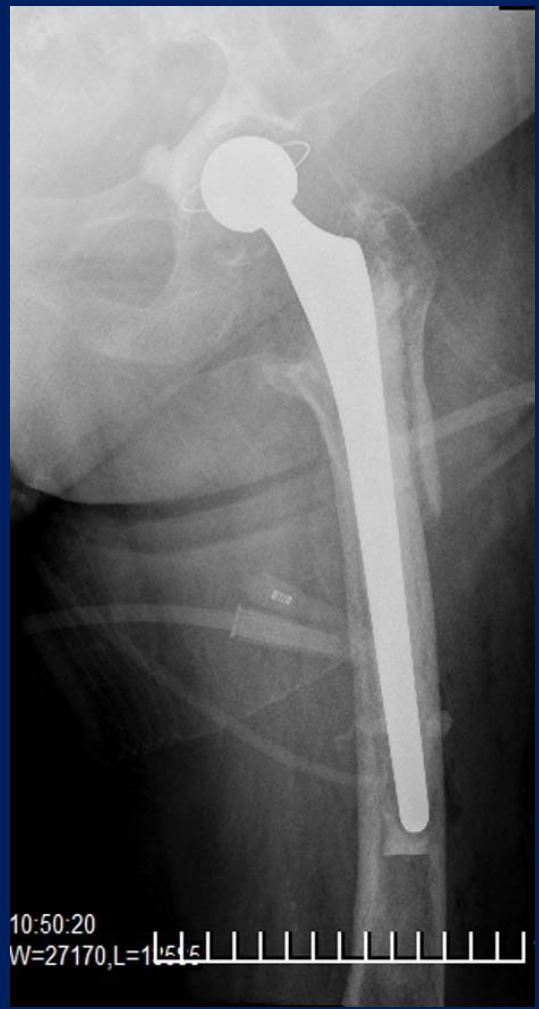


	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100	100+
Śruby kaniulowane	3	6	5	5	4	1	1	0	1	2	0	1	0
Gwóźdź Gamma	0	0	0	1	0	0	1	1	3	2	0	0	0
Bezcementowe	0	1	4	19	19	11	12	9	1	0	0	0	0
Cementowe	0	0	0	1	4	7	24	54	43	34	8	0	1
Bipolarne	0	0	0	0	0	0	1	9	9	11	5	1	0
Austin-Moore	0	0	0	0	0	2	2	5	16	12	8	2	0
Hybrydy	0	0	0	0	0	4	0	0	0	0	0	0	0
Zachowawczo	0	1	1	0	2	3	0	4	2	6	5	0	0

Since 2006, the standard procedure for treating trochanteric fractures is a closed reduction and internal fixation with a Gamma nail.



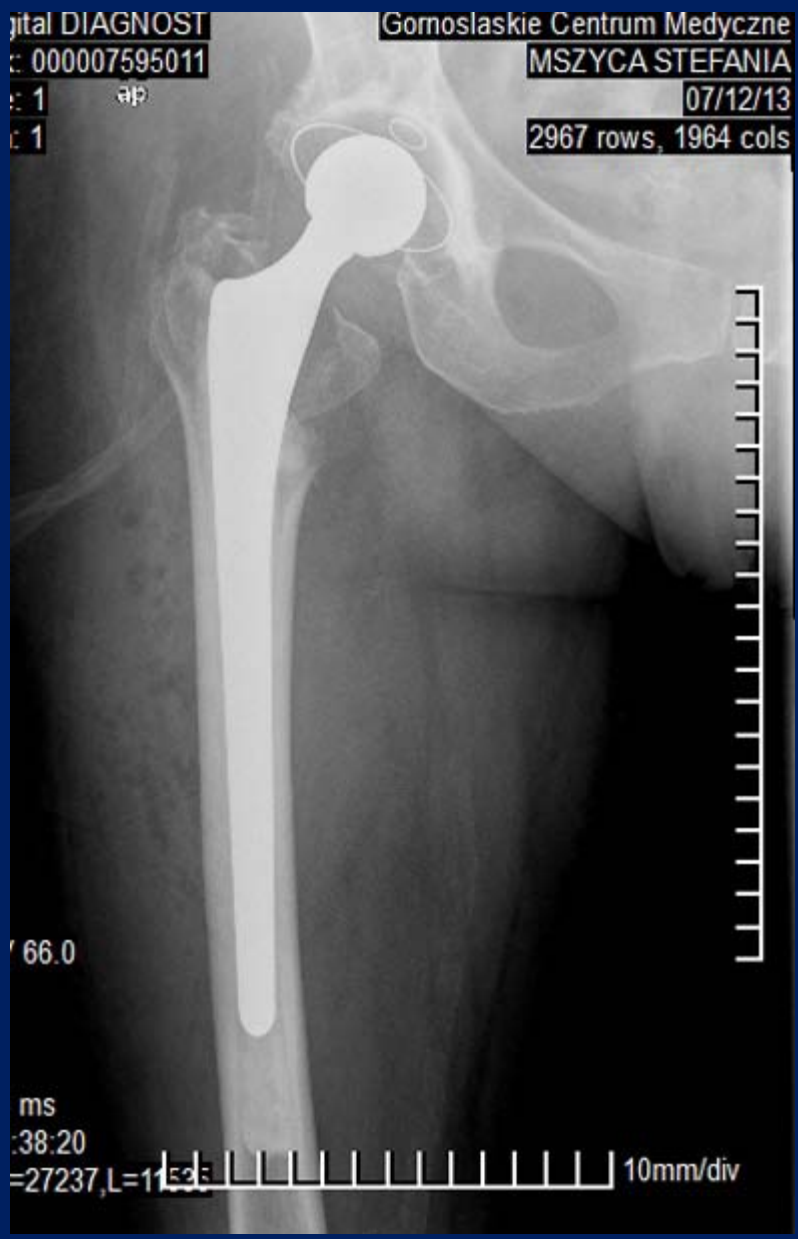






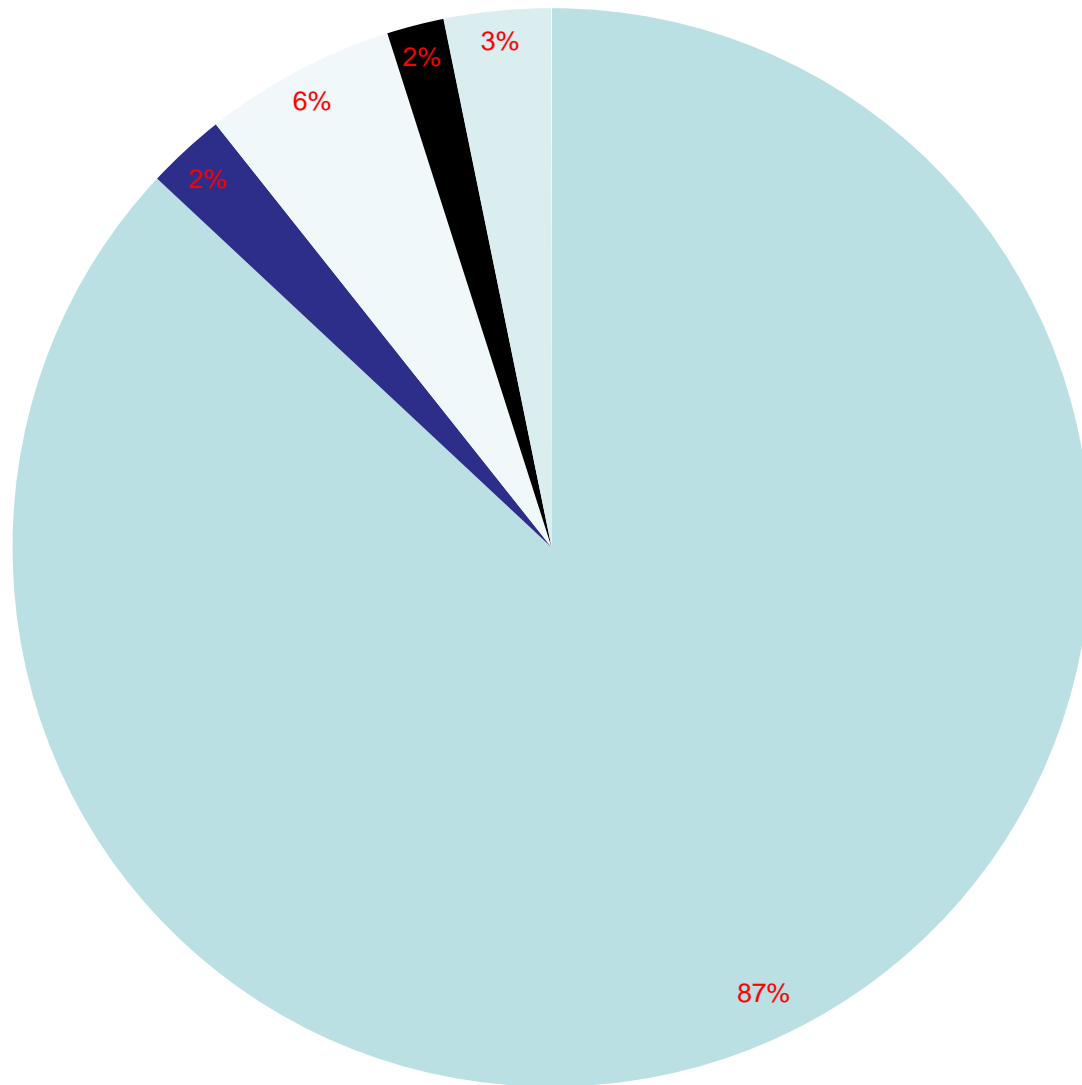






# Comparison of treatment methods - trochanteric fractures

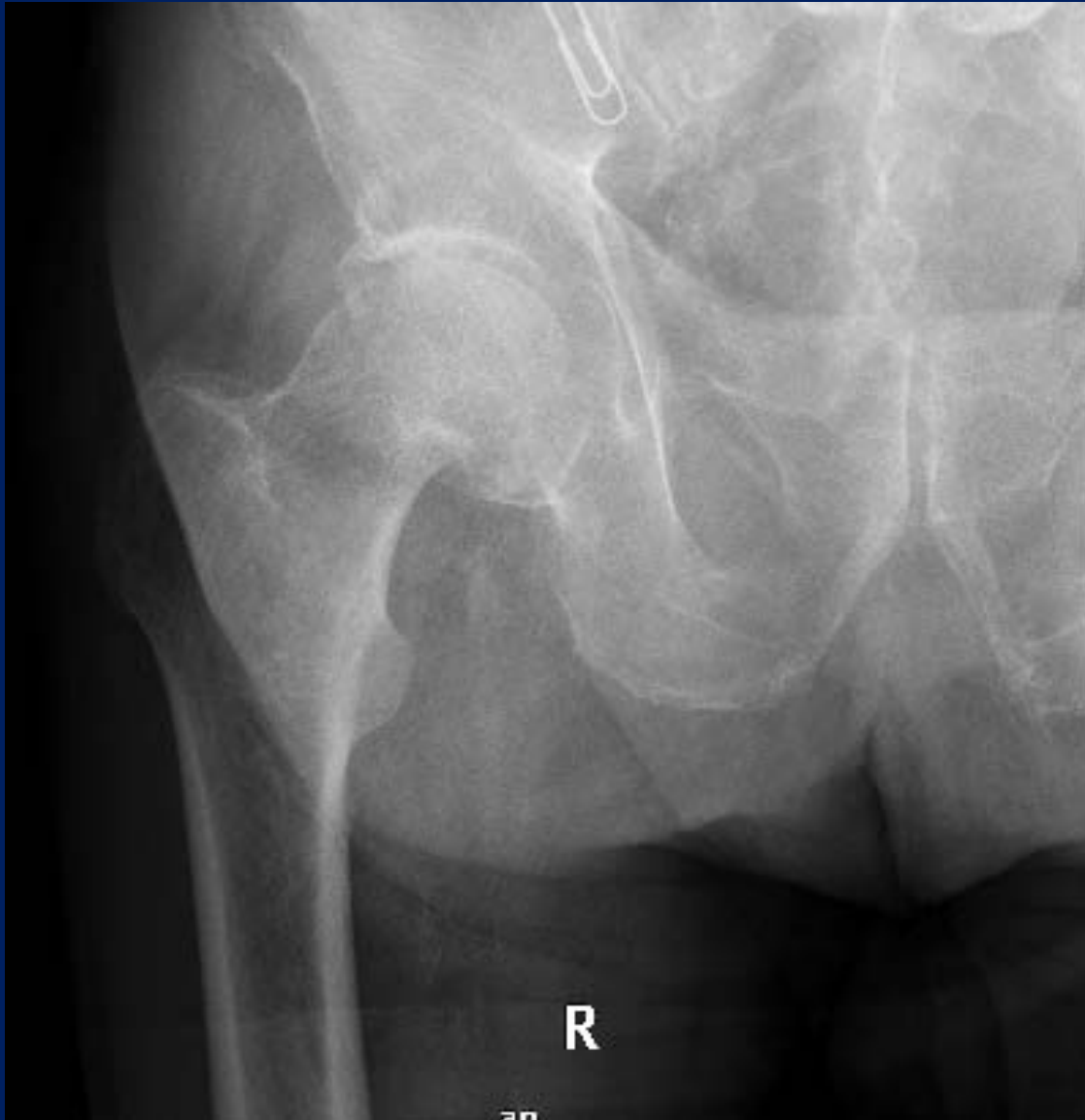
■ Gwoździe Gamma   ■ DHS   ■ Protezoplastyki   ■ Pręty Endera   ■ Nieoperacyjne



# COMPARISON OF TREATMENT METHODS

	FEMORAL NECK FRACTURES	TROCHANTERIC FRACTURES
<b>FIXATION</b>	<b>37[9%]</b>	<b>422[91%]</b>
<b>ENDOPROSTHESIS</b>	<b>342[85%]</b>	<b>26[6%]</b>
<b>NONOPERATIVE</b>	<b>24[6%]</b>	<b>15[3%]</b>
	<b>403</b>	<b>463</b>

97 y/o patient, without commorbidities, healthy, fit



# Operated same day



Currently 99 y/o patient, 2 years after fracture









## Conclusions

- 1. Treatment of femoral neck and trochanteric fractures is still a medical and social problem, in spite of using proper medical criteria for qualification.*
- 2. Despite using modern operative technics we can still observe severe medical complications.*





THANK YOU FOR YOUR ATTENTION