



# KYPHOPLASTY

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# ***KYPHOPLASTY***

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***Paris, France***

# ***KYPHOPLASTY / VERTEBROPLASTY***



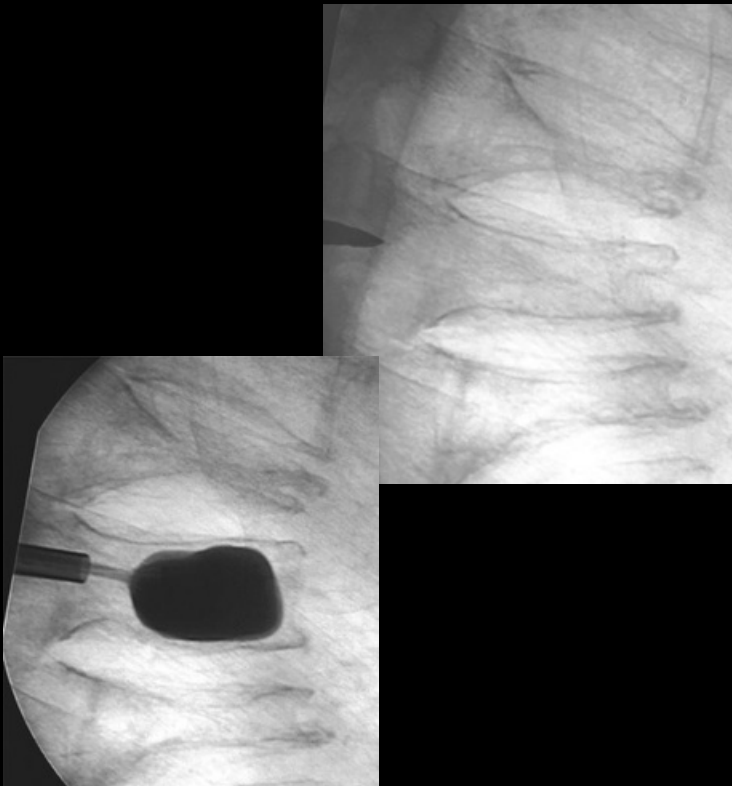
- ***Objectifs:Vertebroplasty:-Analgesic.***

***-Stabiliser.***

***Kyphoplasty:***

***- Correction of vertebral body deformity***

***-Prevention of secondary cyphosis***



# KYPHOPLASTY / VERTEBROPLASTY



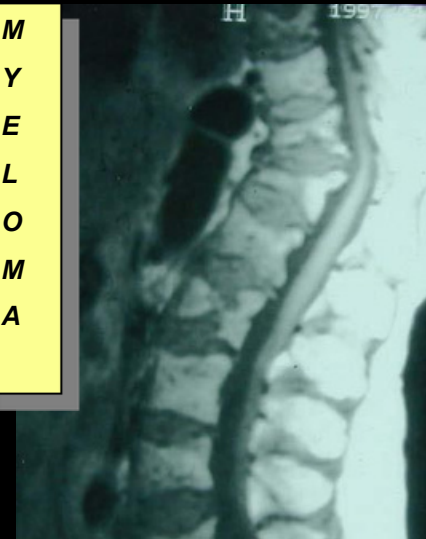
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- **Indications:** Debilitating benign or malignant bone diseases

- agressive angiomas,
- bone metastasis ,

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- ~~myeloma~~ osteoporotic fractures, symptomatic, refractory to analgesics treatment



**Aggressive Angioma**



**OSTEOPOROTIC FRACTURES**

# ***KYPHOPLASTY / VERTEBROPLASTY***



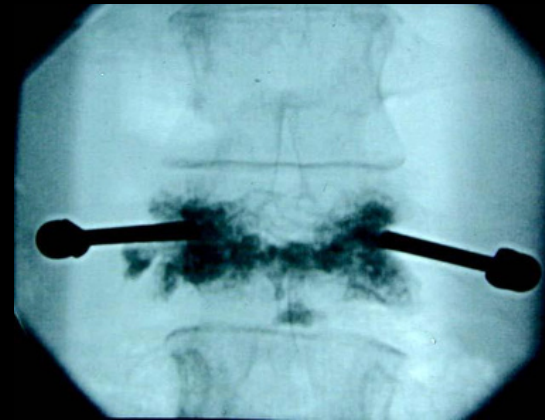
- ***PROCEDURE OF THE VERTEBROPLASTY***

*Widely described in the literature*

*-General anesthesia.*

*-Patient in supine position.*

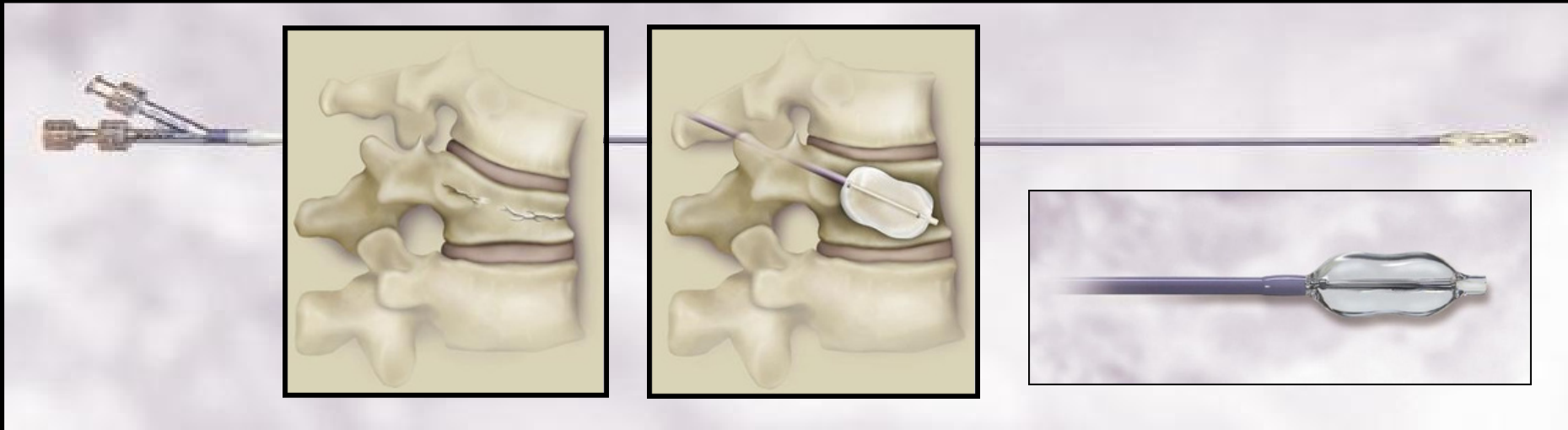
*-uni ou bi-pedicular access*



# KYPHOPLASTY



- *The kyphoplasty may be considered as a moderne vertebroplasty.*
- *It consists of injection of polymethylmetacrylate intra vertebral under flouroscopy, after ballonn dilatation to get recovary of the vertebral bodyheight .*



# ***KYPHOPLASTY***



- ***PROCEDURE OF KYPHOPLASTY:***
  
- ***Local Anesthesia:***
  - Preferable to the patient*
  - Reduce patient movement*
  - Compromis in case of sever Heart disease*
  
- ***General Anesthesia:***
  - *Preferable Method*
  - More comfortable*
  - Strict supine position*

# KYPHOPLASTY

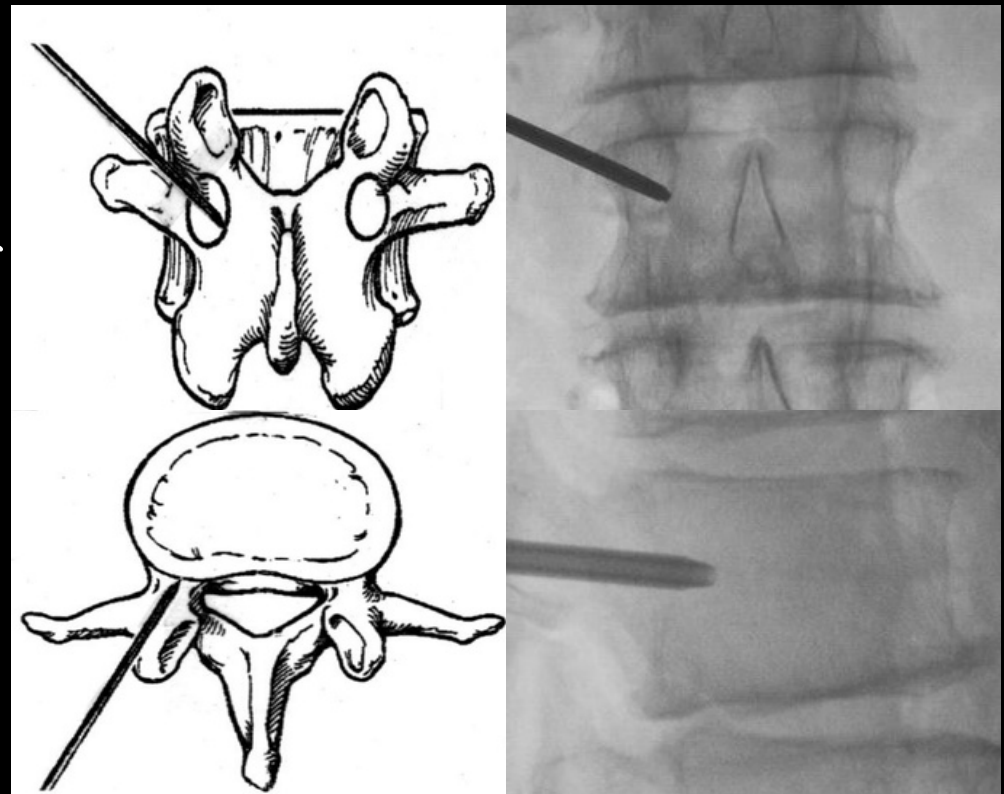


- **Procedure:**

- *bi-pediculaire acces*

- *a 11 Gauge needle should Be always inside the pedicular eye*

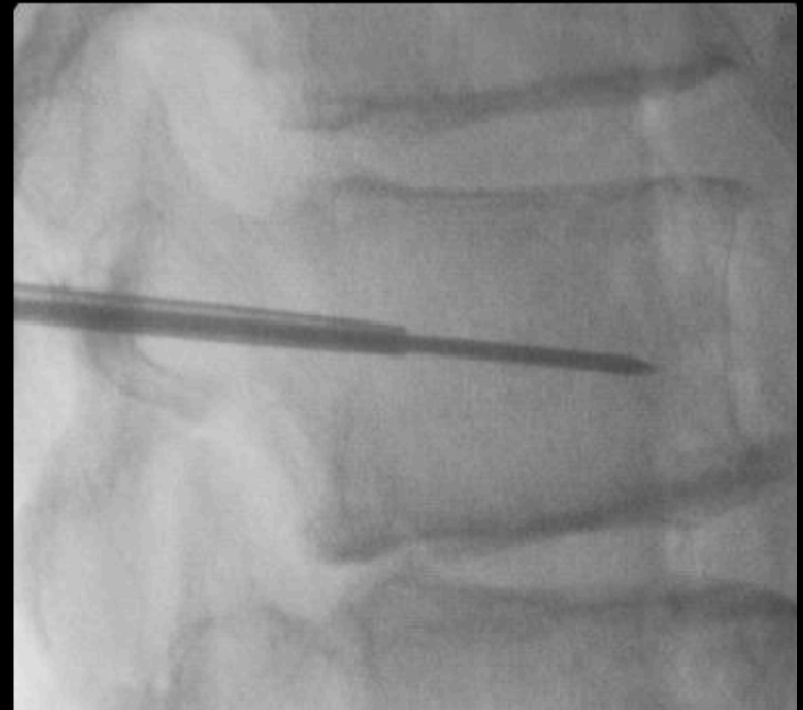
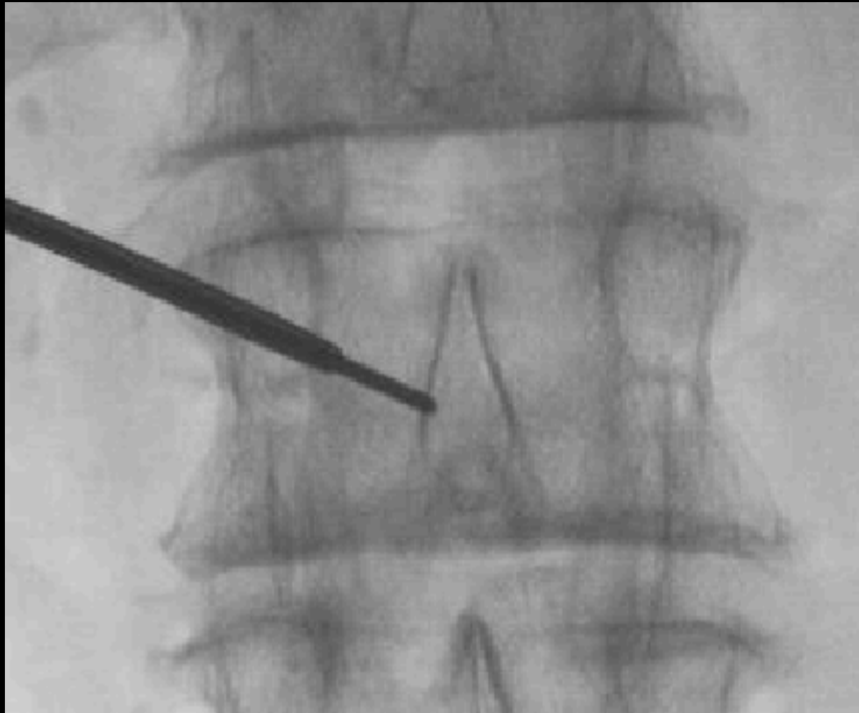
- according to an oblique course of the anteromedial and top to bottom



# ***KYPHOPLASTY***



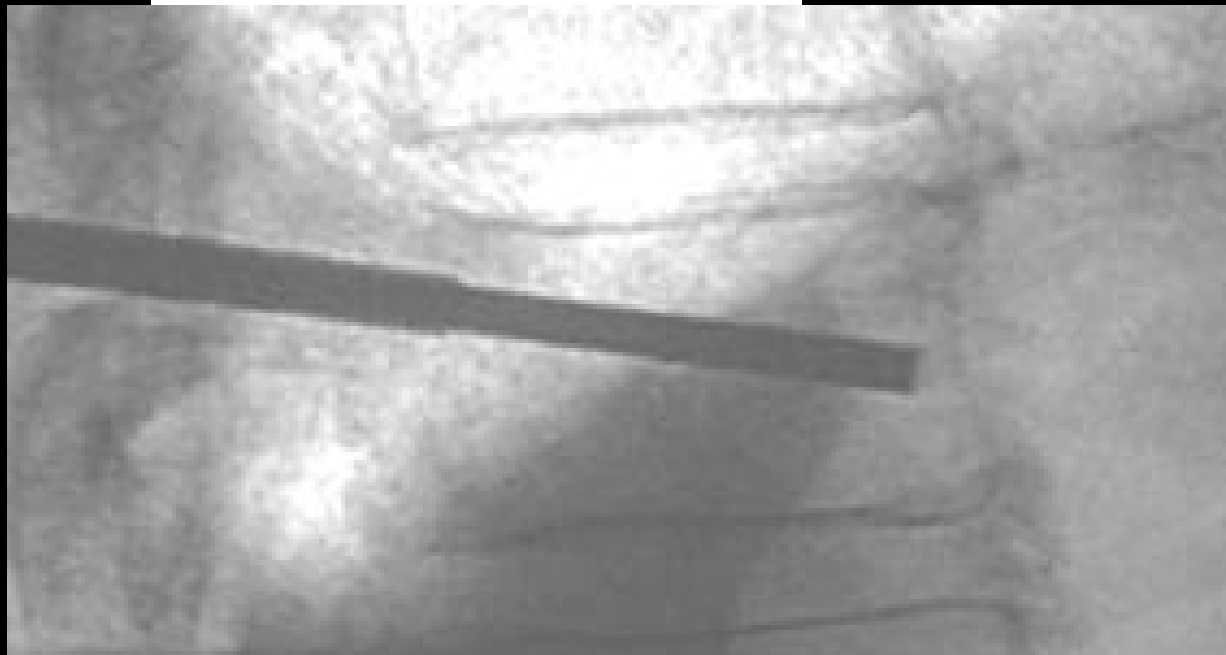
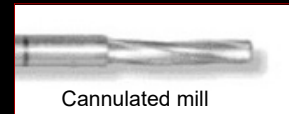
- ***PROCEDURE OF THE KYPHOPLASTY:***  
*-A needle is placed in the vertebral body*



# KYPHOPLASTY



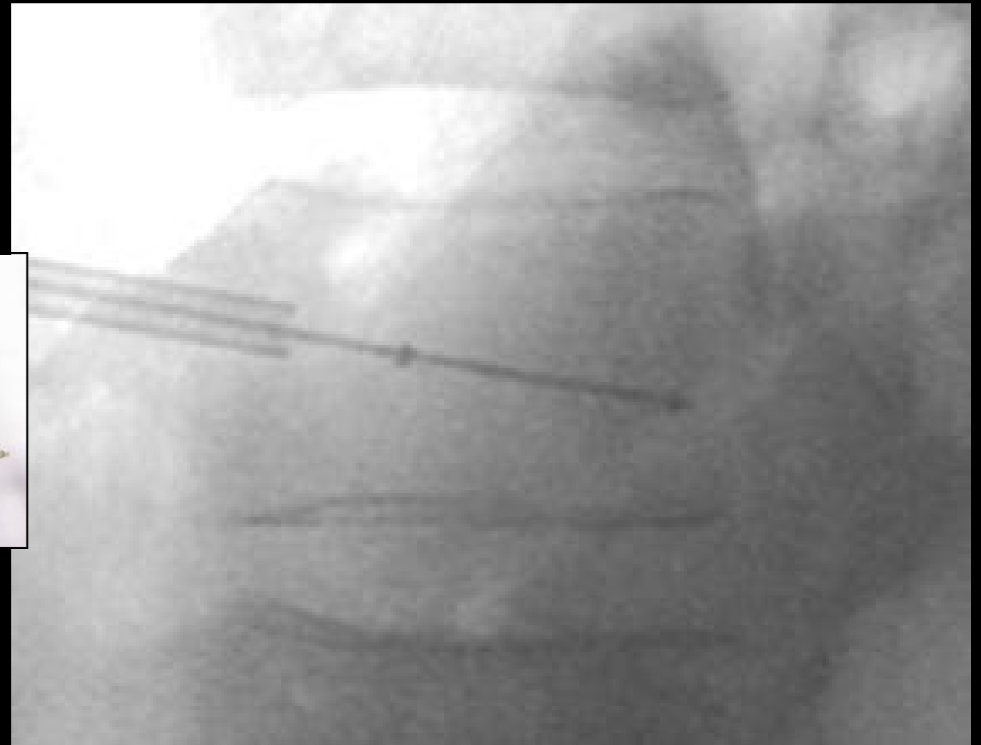
*- The hole made by a needle under Flourosopic control*



# ***KYPHOPLASTY***



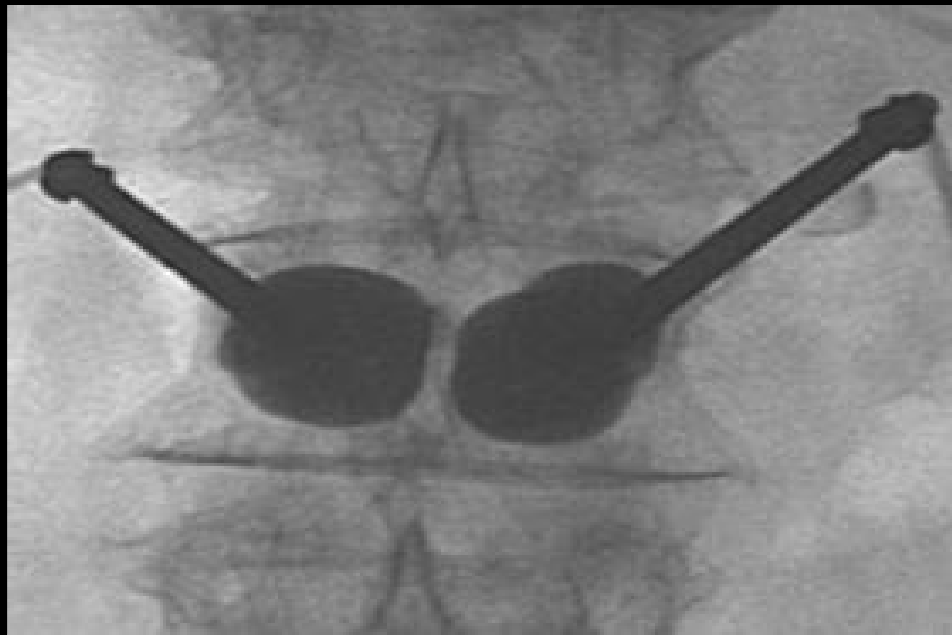
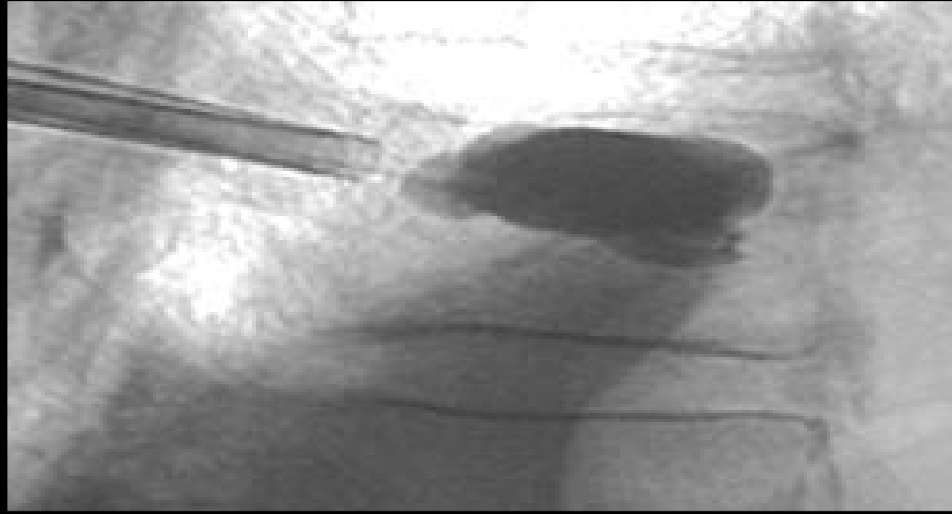
- ***PROCEDURE OF THE KYPHOPLASTY:***
  - The balloons are introduced into the tunnels



# KYPHOPLASTY



- balloons inflated simultaneously



# KYPHOPLASTY



- **PROCEDURE OF THE KYPHOPLASTY:**

- The balloons are deflated then the cement is injected under flouroscopy control in the new cavities formed by the balloon.
- The filling is observed under fluoroscopy to and fro



# *KYPHOPLASTY*



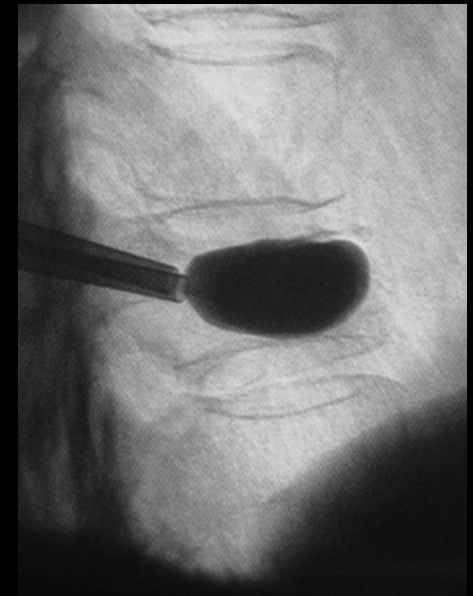
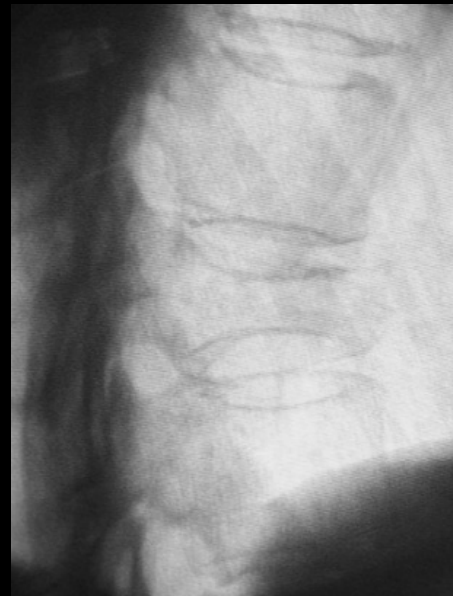
Patient: 79 YO Female

Diagnosis: Primary osteoporosis

Fracture :

T-11, 7 weeks old

Courtesy of James Hamada, M.D., Torrance, CA



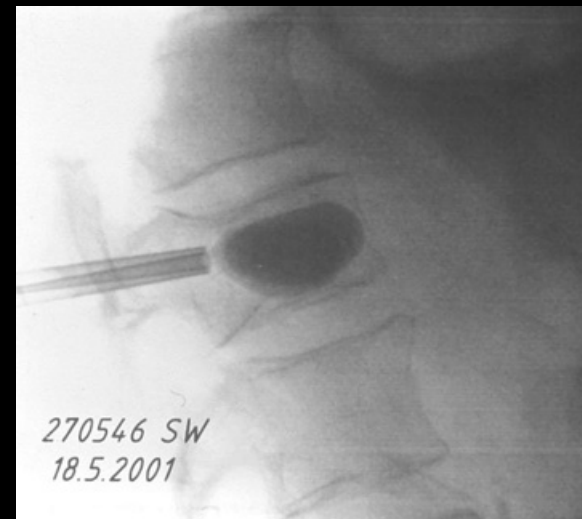
# ***KYPHOPLASTY***



Patient: 55 YO Male

Diagnosis: Secondary Osteoporotic Fracture :

Courtesy of Ulrich Berlemann, M.D., Germany





# ***KYPHOPLASTY / VERTEBROPLASTY***

- ***COMPLICATIONS:***

- Fever, inflammatory syndrom

- ➔ NSAID

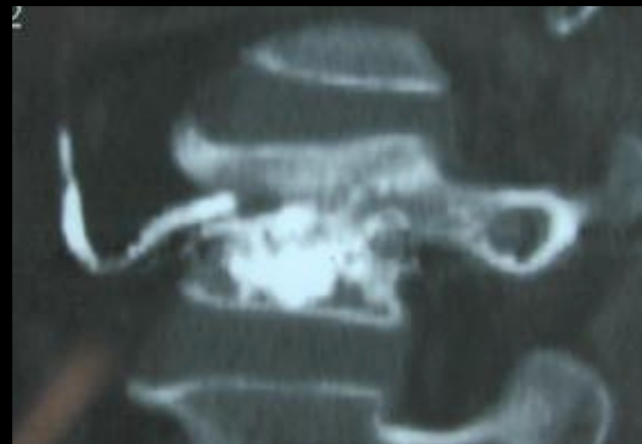
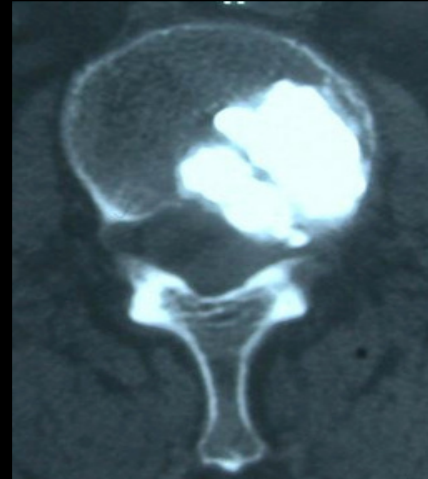
- Pain recurrence due local heat

- Compression:

- spinal cord / nerve root  
(foramen)

- Veinous Thrombosis :

- ciment very liquid

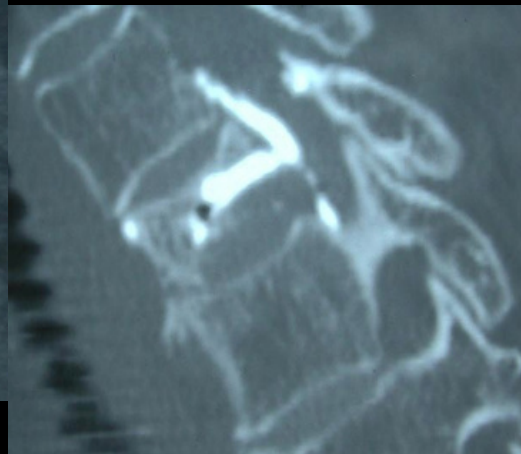
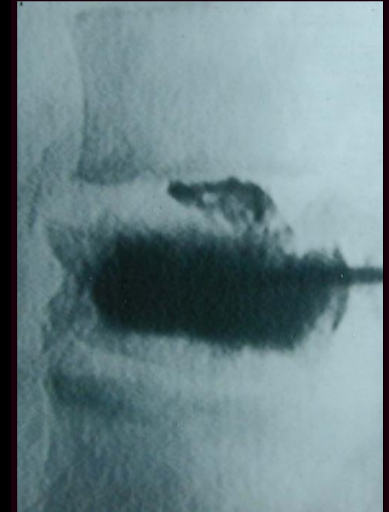


# ***KYPHOPLASTY / VERTEBROPLASTY***



- ***COMPLICATIONS :***

- *post vertebroplasty CT shows a leakage of the ciment in about more than 70% of cases*
- *5 to 7,5 % of these cases are symptomatic, usually well tolerated.*

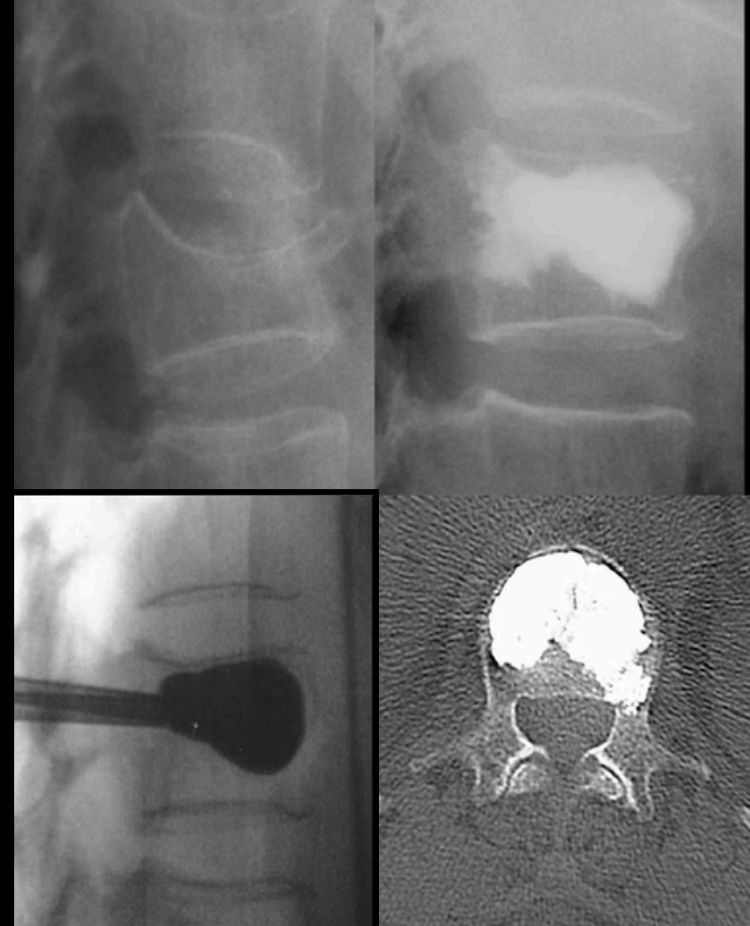


# KYPHOPLASTIE



## • **COMPLICATIONS of KYPHOPLASTY:**

- *The leakage of the cement in the kyphoplasty is about 9 %. No symptomatic complication Has been reported.*
- *This low rate is due to:*
  - *The best control of filling of the cavity made by the ballon.*
  - *using of an ciment less fluid*
  - *and low injection pression.*

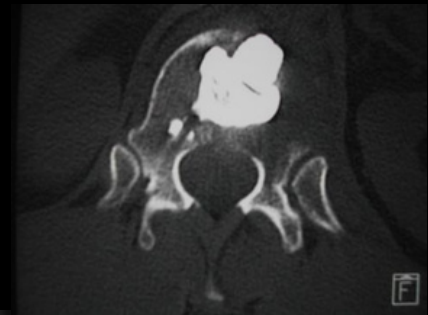
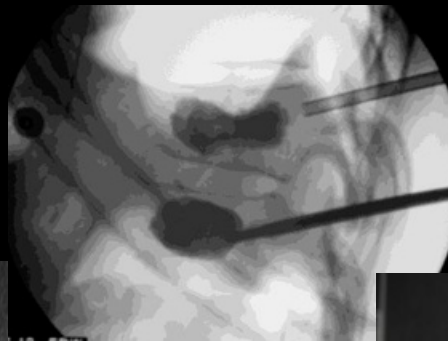
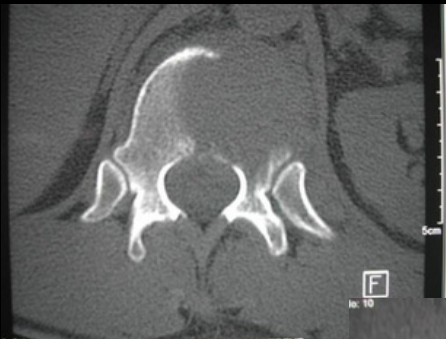


# KYPHOPLASTY VERSUS VERTEBROPLASTY



## CONCLUSION:

- *The vertebroplasty consists a remarkable progression in the management of malignant or symptomatic osteoporotic vertebral fractures .*
- *The kyphoplasty shows low complications rate other than the vertebroplasty in case of osteolytic lesions with cortical destruction.*



# ***KYPHOPLASTY VERSUS VERTEBROPLASTY***



## ***CONCLUSION:***

- The anagesic and fonctional effects is similar in the two techniques.*
- Actuelly, there is comparesion study of these tow procedures.*
- The resultats of the kyphoplasty is more discutable , in our experience, the restoration of the vertebral body height was observed in 2 cases of 66.*