

# hyprevention®

THE SOLUTION FOR PATIENTS AT RISK OF HIP FRACTURE

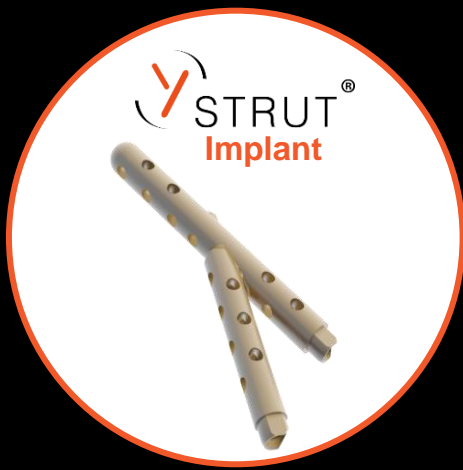


PROXIMAL  
FEMUR SYSTEM



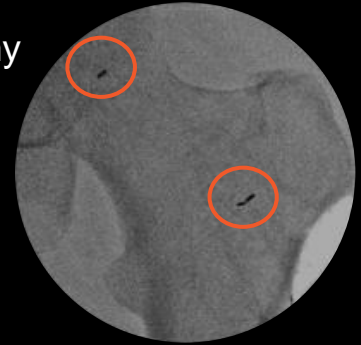
A STRUTPLASTY® TECHNIQUE FOR BONE CONSOLIDATION

[www.hyprevention.com](http://www.hyprevention.com)



## PRODUCT DESCRIPTION

- Implantable medical device composed of 2 implants connected in situ, made of radio-transparent PEEK polymer
- Range of sizes to fit patient's anatomy
- Combined with PMMA bone cement
- Bone reinforcement<sup>14</sup>

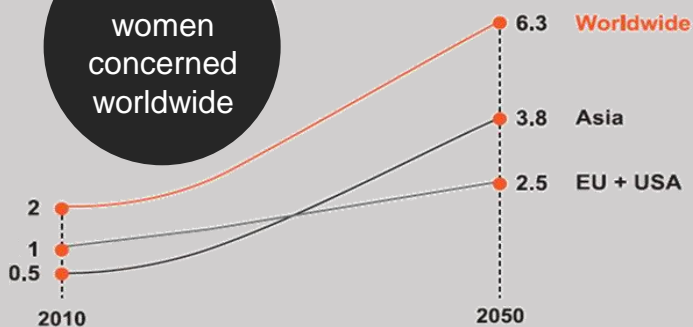


## HIP FRACTURE : A GLOBAL HEALTH ISSUE

More than 2 million hip fractures annually worldwide, over 6 million in 2050<sup>1,2</sup> with growing and aging population

TRAUMATOLOGY

60 million women concerned worldwide



- High risk of **contralateral hip fracture**
  - 9% at 1 year
  - Up to 20 % at 5 years<sup>3</sup>
- Serious **loss in quality of life** : chronic pain, reduced mobility and increasing of **dependence**<sup>4</sup>
- **Patients' mortality** 2-fold<sup>3</sup>
- High incremental **costs** for hip fracture treatment<sup>5</sup>

⇒ Surgical prevention : a potential solution to avoid contralateral hip fracture with associated morbidity and costs<sup>6,7</sup>

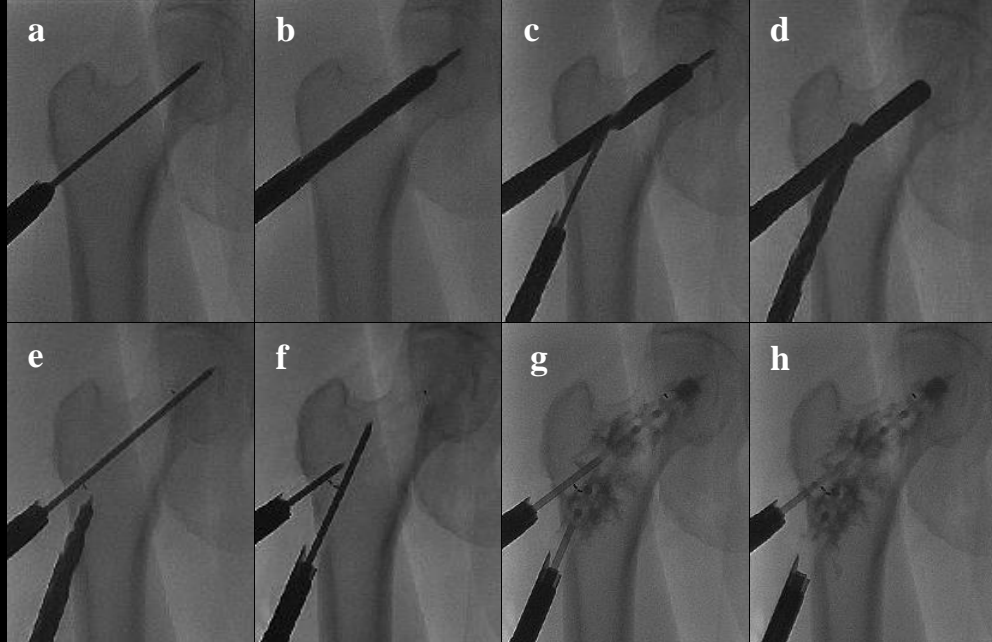
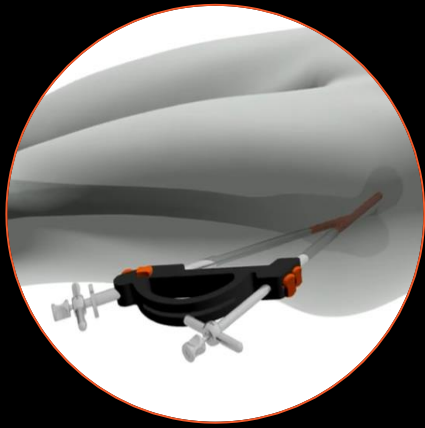
## TRAUMATOLOGY INDICATION



STRUT<sup>®</sup> is indicated for **contralateral** percutaneous internal fixation of proximal femur, in osteoporotic patients with a low energy pertrochanteric fracture on the first side

- **Same surgical time** for the fracture treatment and the contralateral procedure **or prophylactic surgery in a second time** (within 120 days after the fracture treatment)
- Clinical experience<sup>15,16</sup> :  
**1<sup>st</sup> patient in February 2013**

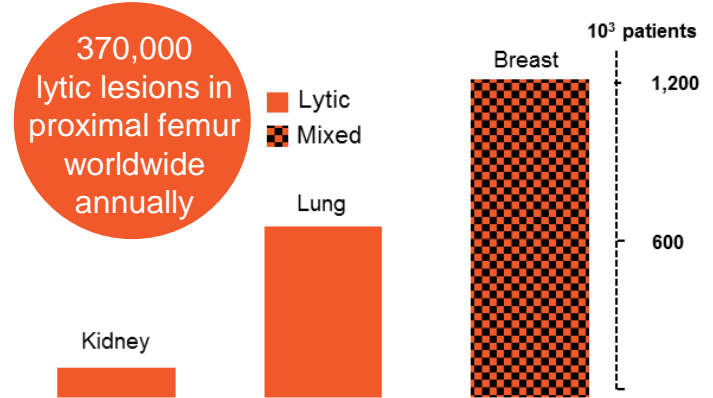
# MINIMALLY INVASIVE PROCEDURE



## HIP FRACTURE : A GLOBAL HEALTH ISSUE

**25% of metastatic bone lesions occurs in the proximal femur, patients at high risk of pathological fractures<sup>8</sup>**

- **Bone is the third location of metastases** after the lungs and liver. The origin of lytic bone metastases varies and is often linked to a primary tumour of the thyroid, kidney, lung or breast<sup>8</sup>
- Severe consequences of pathological fractures : **patients' life expectancy affected** and **loss of quality of life<sup>9</sup>**



Bone metastasis incidence per type of cancer<sup>11,12,13</sup>

ONCOLOGY

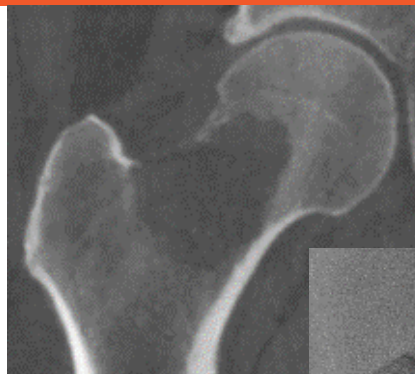
⇒ Various surgical techniques, like standard osteosynthesis fixation, are being performed to treat lytic bone lesions, prevent these fractures and improve patients' quality of life<sup>10</sup>

## ONCOLOGY INDICATION

Y-STRUT<sup>®</sup> is indicated for percutaneous internal fixation for **impending pathological fracture** of proximal femur - act of last resort (ultima ratio)

- Minimally invasive procedure allows to continue the **chemotherapy treatment**
- **Short hospitalization duration** (mean 2.3 days)
- PEEK polymer material allows **local radiotherapy**
- Clinical experience<sup>15,17</sup>:

1<sup>st</sup> study completed in 2016 on **10 patients followed during 1 year**





## REFERENCES

1. Cooper et al. Osteoporos Int. 1992 Nov; 2(6):285-9
2. <http://www.indexmundi.com>
3. Ryg et al. J Bone Miner Res. 2009 Jul; 24(7):1299-307
4. Keene et al. BMJ. 1993; 307:1248
5. Melton III et al. Osteoporos Int. 2003; 14: 383-388
6. Giannini et al. Clin Cases Miner Bone Metab. 2011;8(1):51-54
7. Ferrari et al. Arch Osteoporos. 2016;11(1):37
8. Hage et al. Orthop Clin North Am. 2000; (31):515-528
9. Harvey et al, Clin Orthop Relat Res. 2012 Mar; 470(3):684-91
10. Arvinius et al. Int Orthop. 2014; 38:129–132
11. Coleman. Clin Cancer Res. 2006;12:6243s-6249s
12. <http://globocan.iarc.fr>
13. Kenan et al. Cancer Medicine. 6e 2003. pp. 2477-9
14. Szpalski et al. Clin Biomech. 2015 Aug; 30(7):713-9
15. Cornelis et al. J Orthop Surg Res. 2017 Feb 9;12(1):27
16. Szpalski et al. J Osteopor Phys Act. 2017; 5:2 DOI: 10.4172/2329-9509.1000202
17. Cornelis et al. Cardiovasc Intervent Radiol. 2017 Jul;40(7):1070-1076

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Medical device

For more information, see the instructions for use  
PLA-HYP01-EN v07

Patented

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(Not CE marked, not FDA cleared)

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