

# **“Trattamenti ortesici del rachide”**

# INDICE

## Corsetti

- Adulto
- Bambino

## Impronta

- Classica (Gessata)
- Elettronica (Cad Cam)

# CORSETTI PER ADULTO

- Lombalgia
- Spondilolistesi
  - Scoliosi
  - Ipercifosi

# Lombalgia

- Ortesi bivalve in polietilene
- Allacciatura laterale
- Valve sovrapposte lateralmente
  
- In casi particolari:*
- utilizzo di polietilene a bassa densità
- cuscinetto pneumatico localizzato sul punto dolente





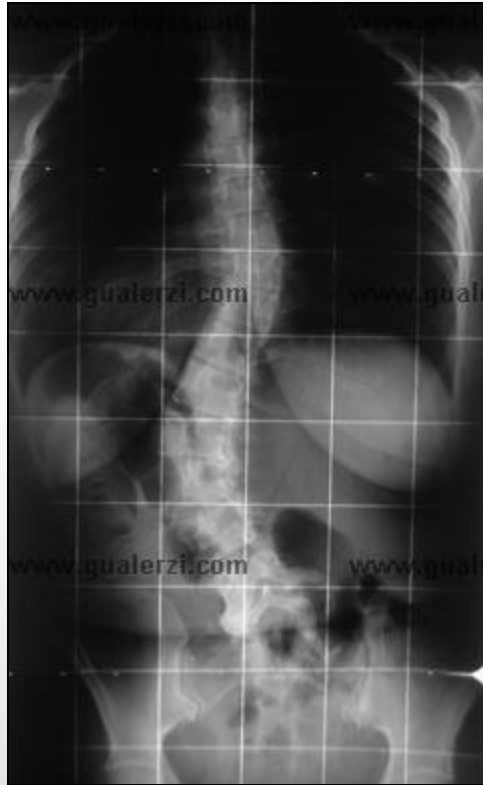
Es.1



Es.2



Es.3



Es.4







Es.5





Es. 6



Es. 7



Es. 8



Es. 9



Es. 10





Es. 11

# Spondilolistesi

-Ortesi monovalva in polietilene

-Allacciatura anteriore

-*In casi particolari:*

-utilizzo di polietilene a bassa densità

-cuscinetto pneumatico localizzato sul punto dolente





Es.1

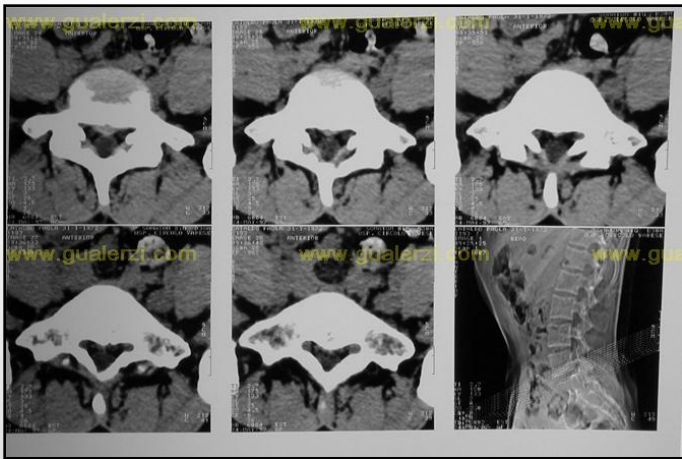


Es.2



Es.3

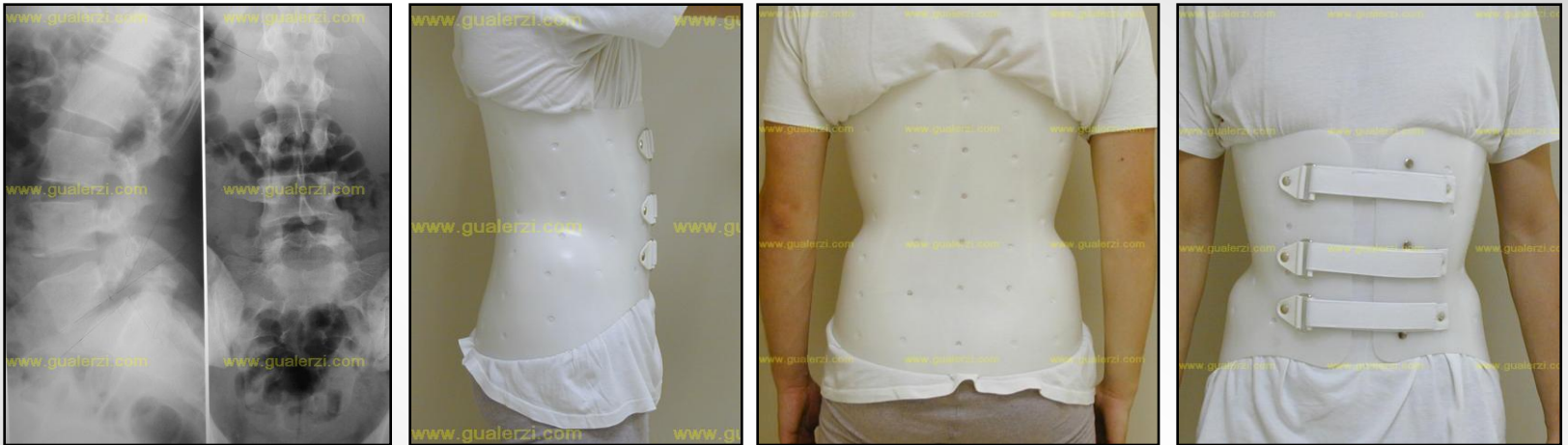




Es. 4







Es. 5

# Scoliosi

- Ortesi bivalva in polietilene
- Con o senza appoggio sternale
  
- In casi particolari:
- utilizzo di polietilene a bassa densità
- cuscinetto pneumatico localizzato sul punto dolente



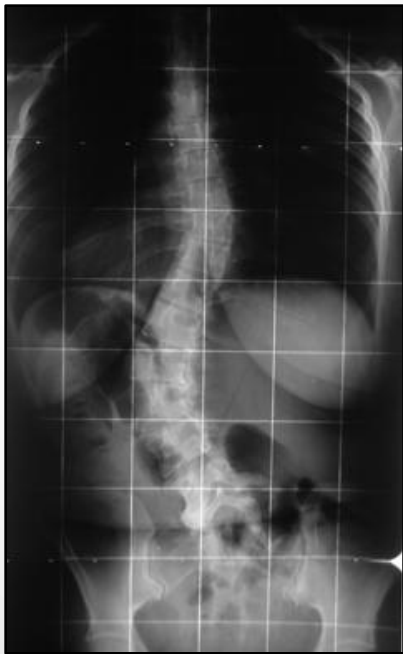
**Es.1**





Es. 2









# Ipercifosi

- Ortesi bivalve in polietilene
- Appoggio sternale
- Ampia apertura anteriore
- Allacciatura laterale
- Valve sovrapposte lateralmente

*-In casi particolari:*

- utilizzo di polietilene a bassa densità
- cuscinetto pneumatico localizzato sul punto dolente

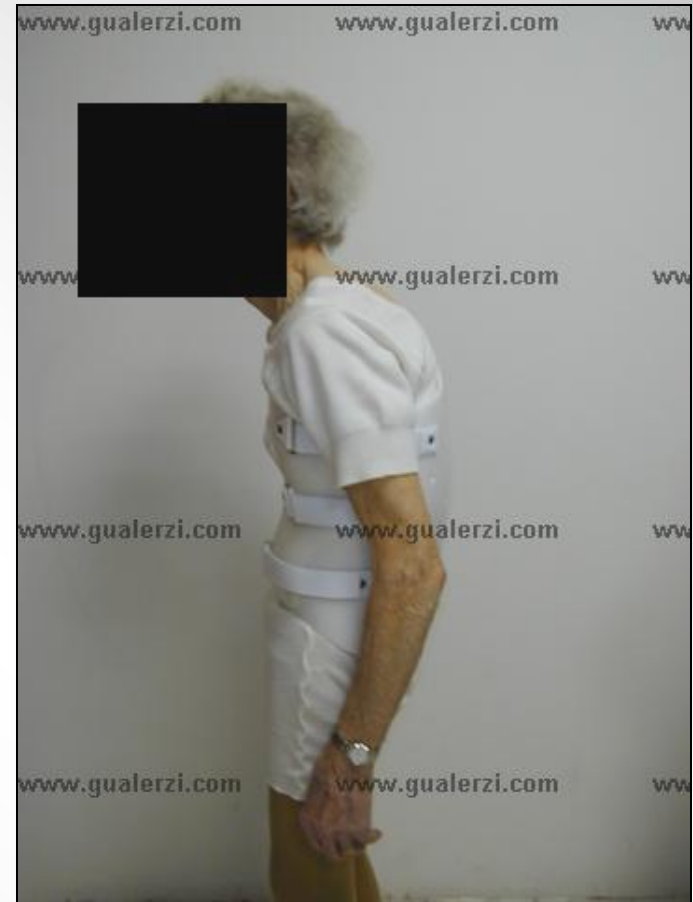




**Es.1**



Es.2



Es.3





**Es.4**



# CORSETTI PER BAMBINO

- Scoliosi
- Ipercifosi
- Spondilolistesi
- Pre-Operatori

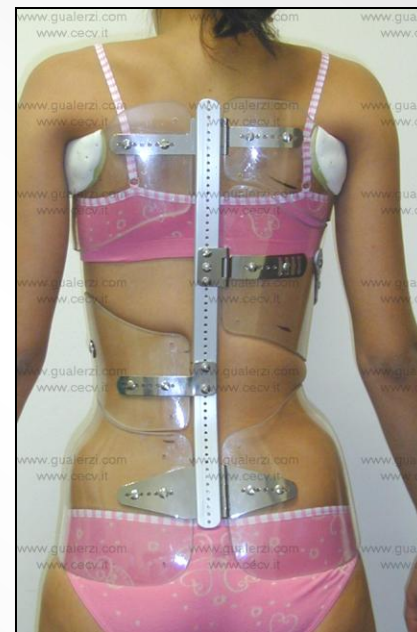


# Scoliosi

- [Lionese](#)
- [Milwaukee](#)
- [Univalva Asimmetrico](#)

# Lionese

- Ortesi polivalve in materiale termoplastico ad alta rigidità
- Valve orientabili
- In casi particolari:*
- utilizzo di polietilene ad alta densità





1



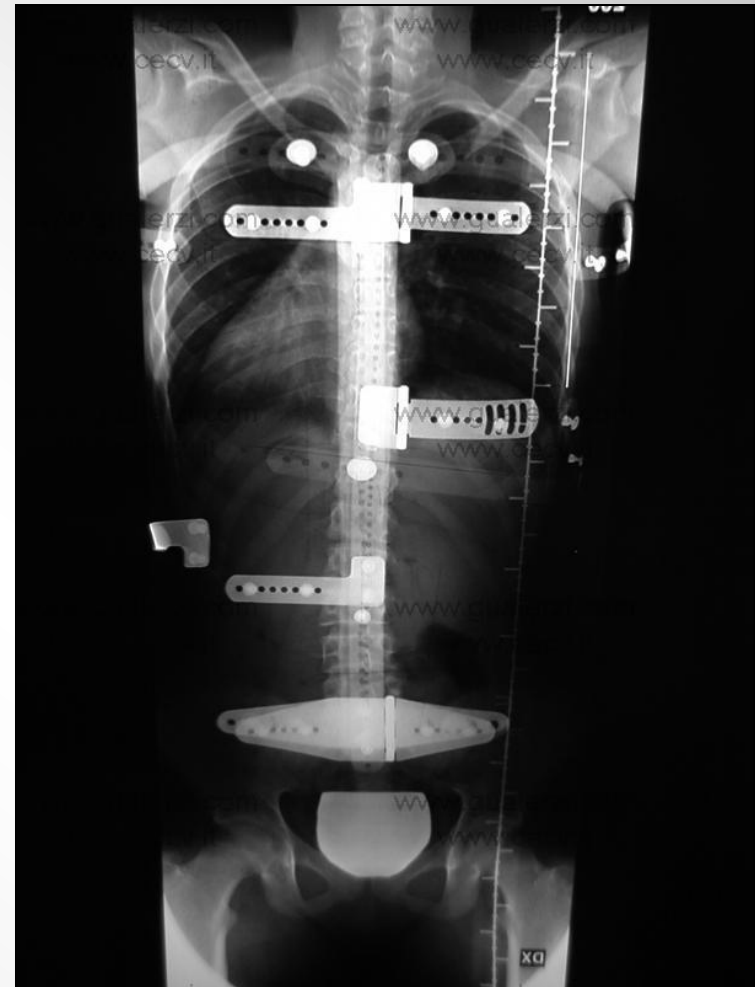
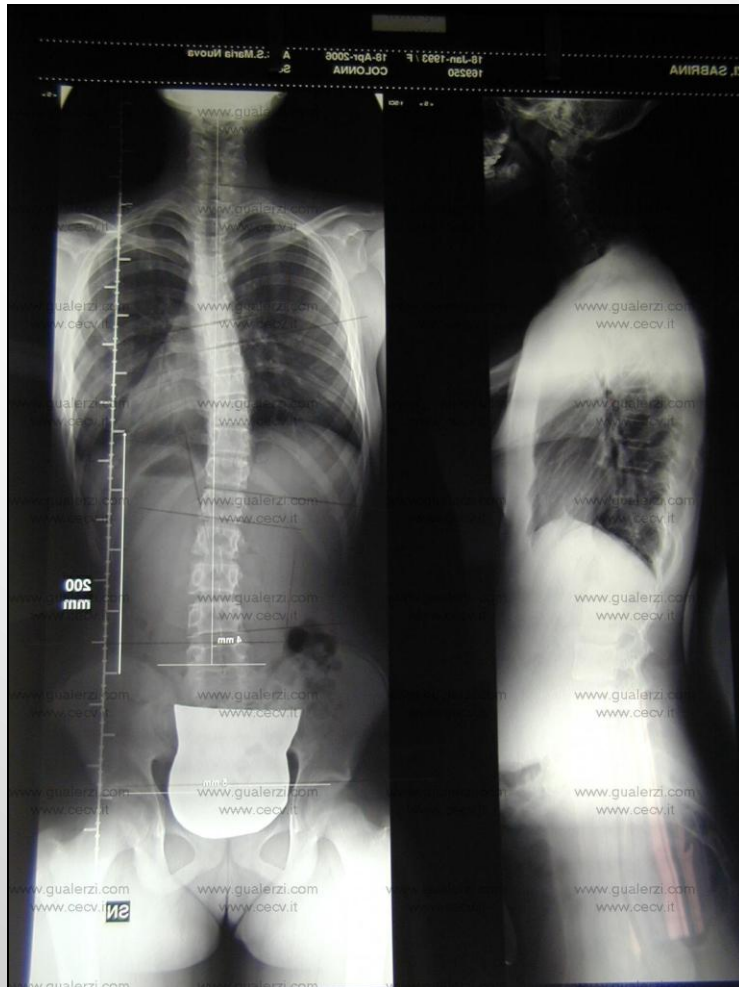


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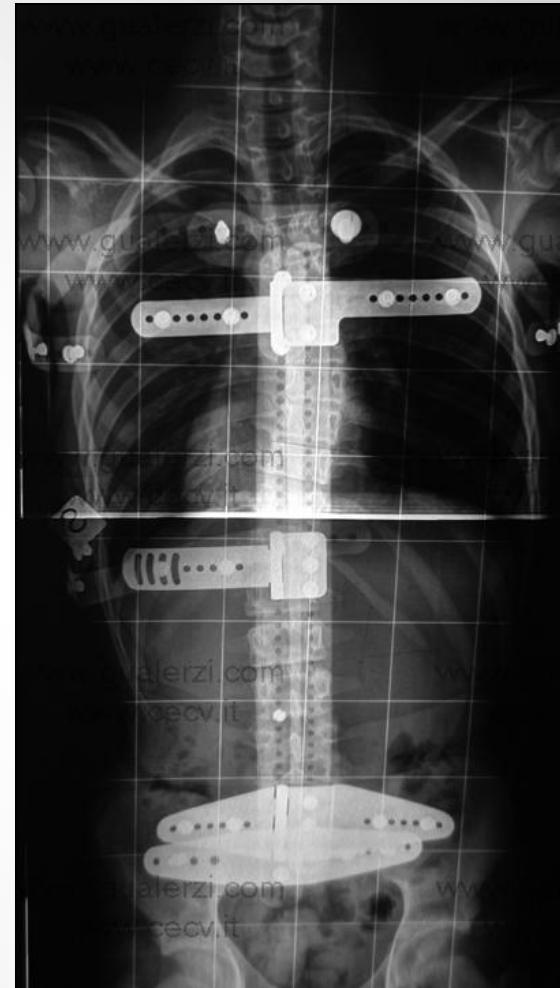
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4

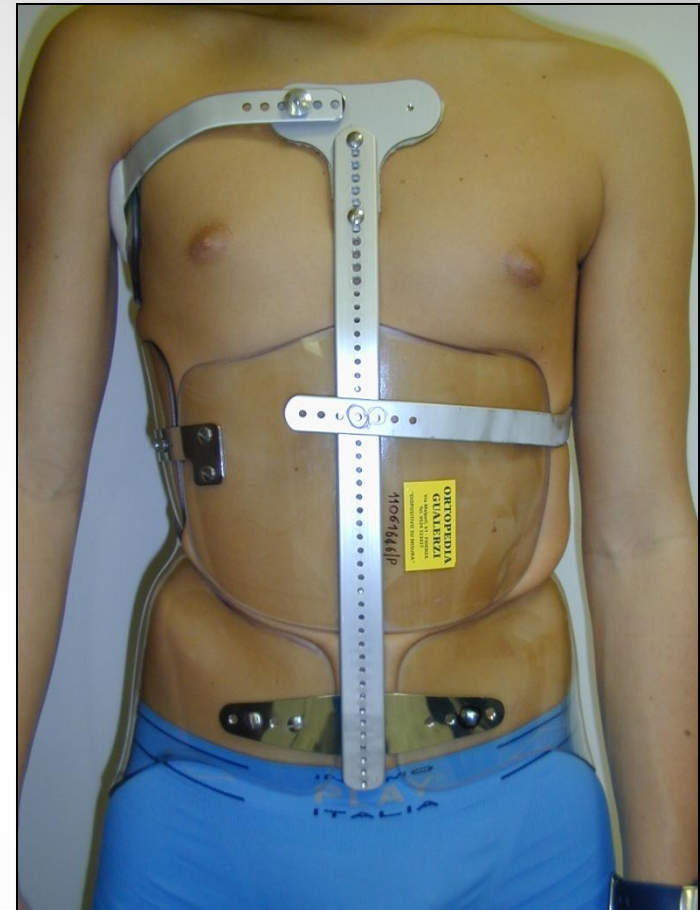
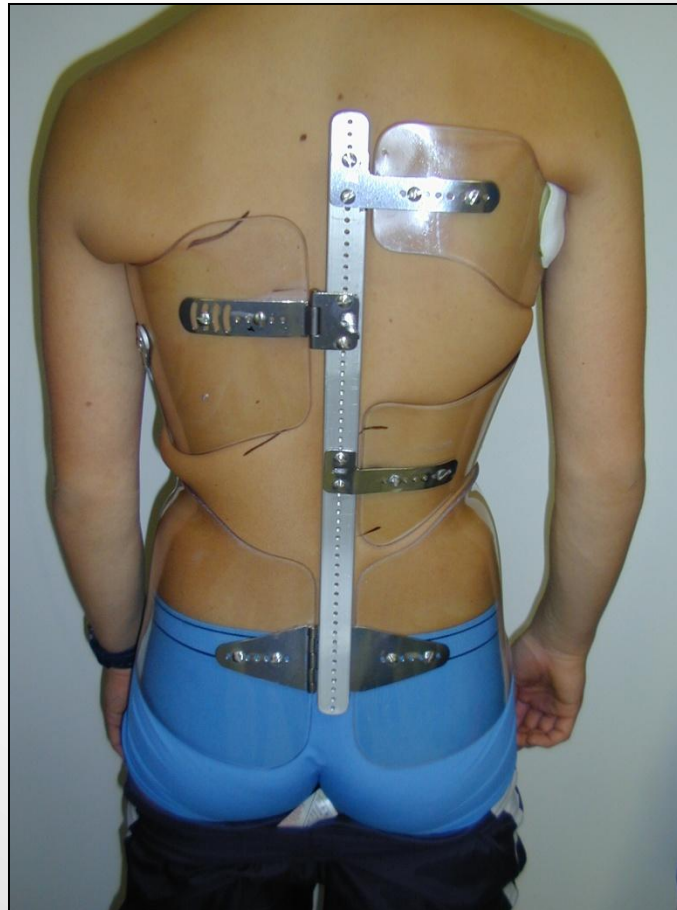


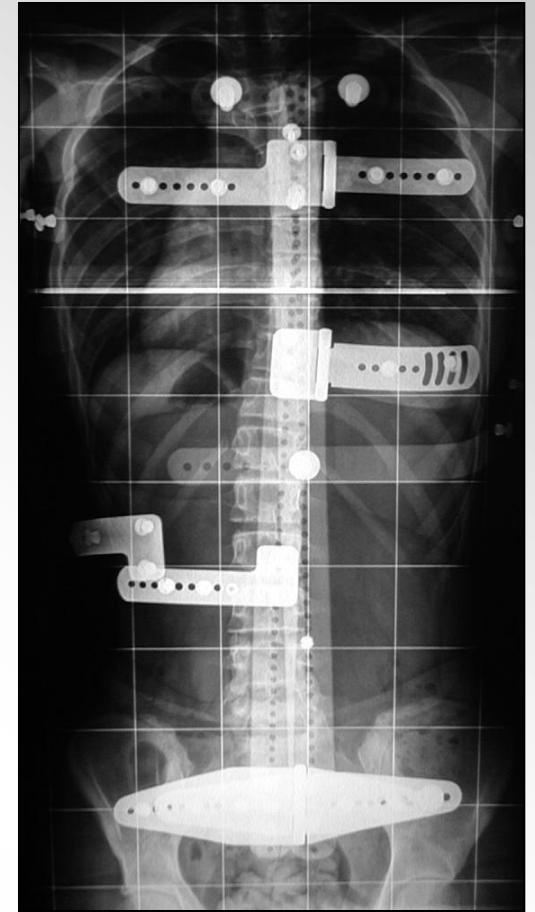




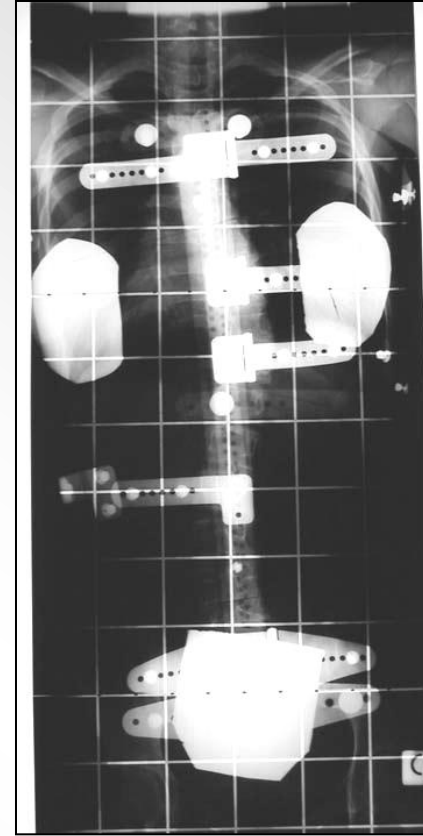
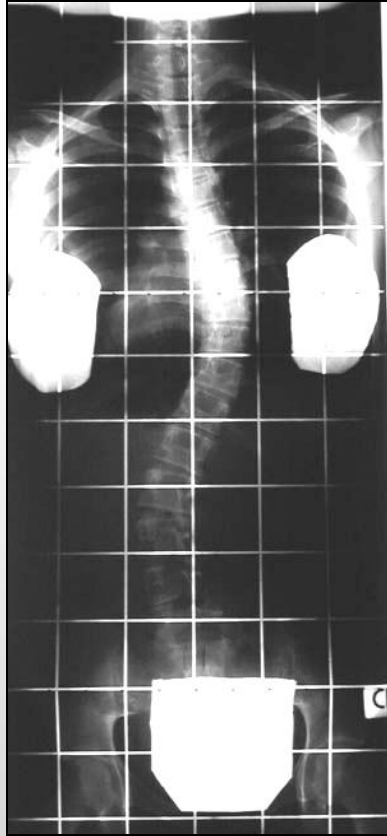
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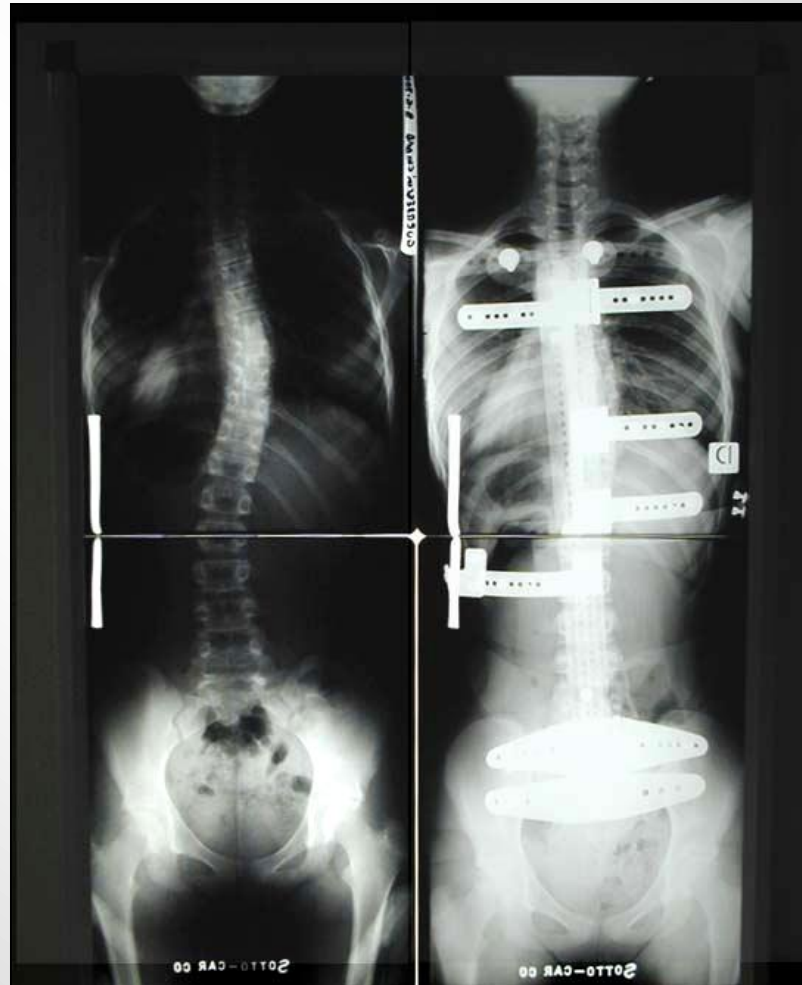


7

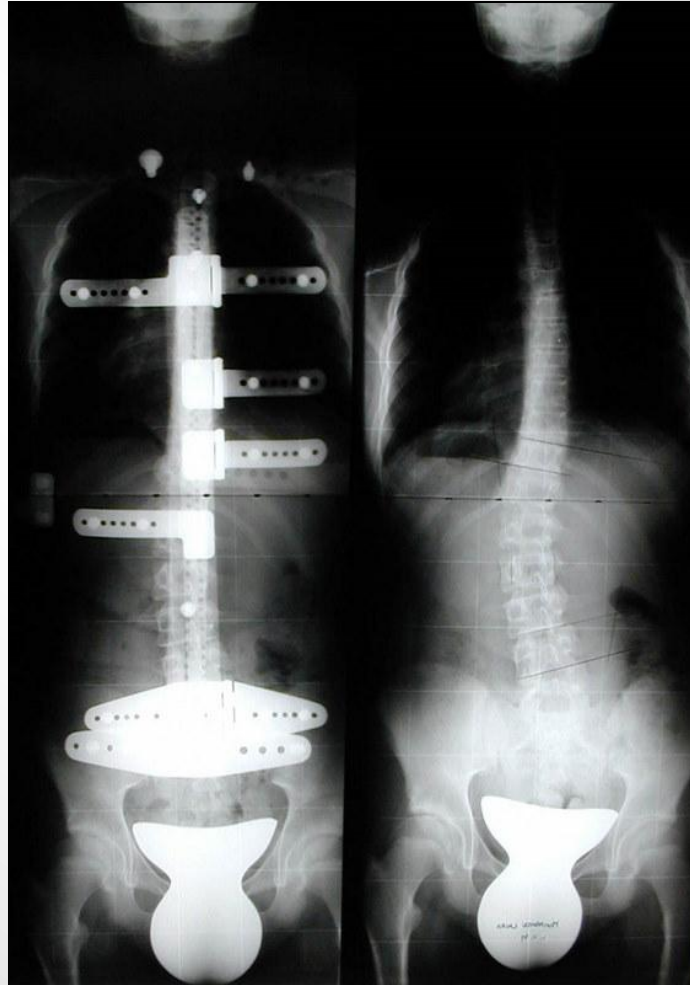


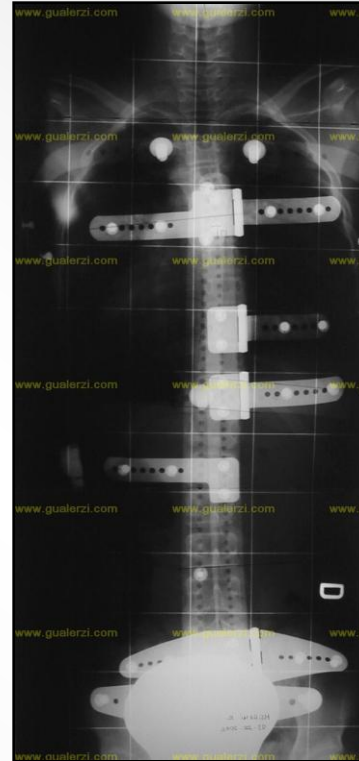
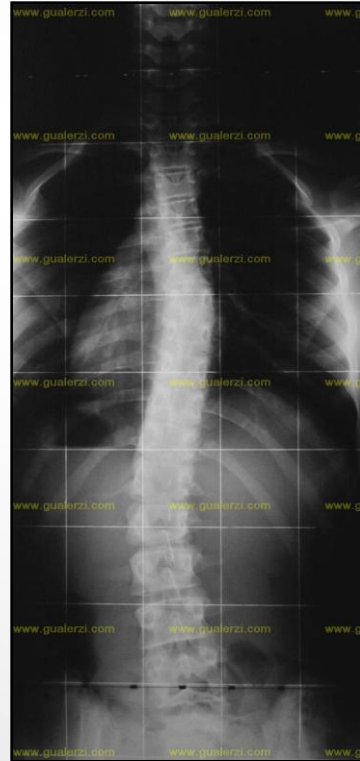






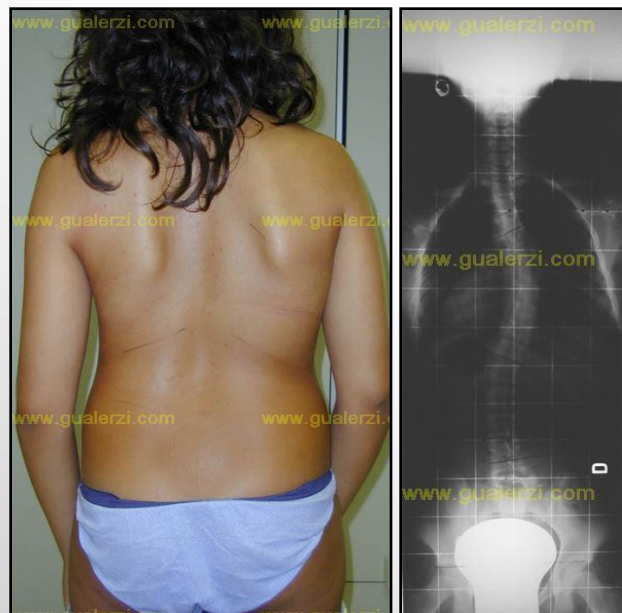




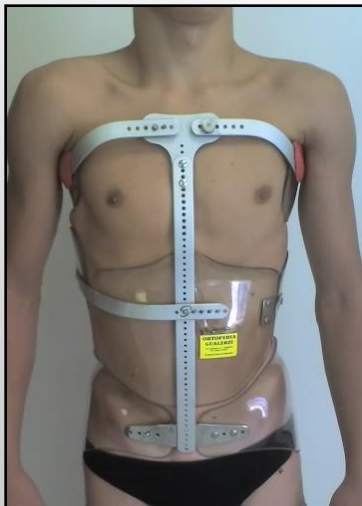
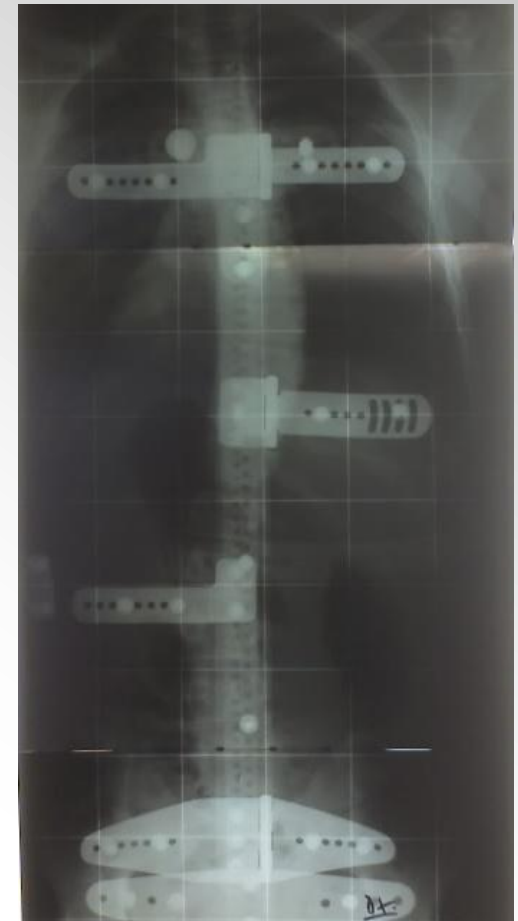
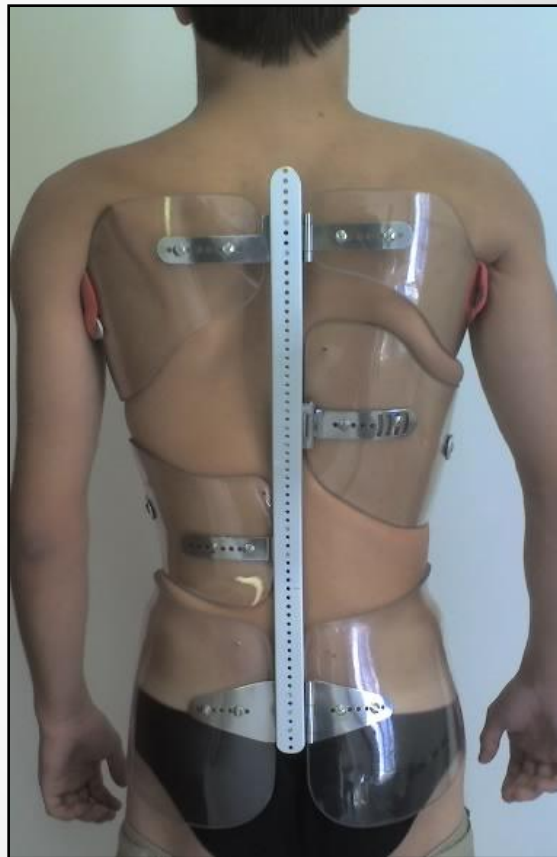


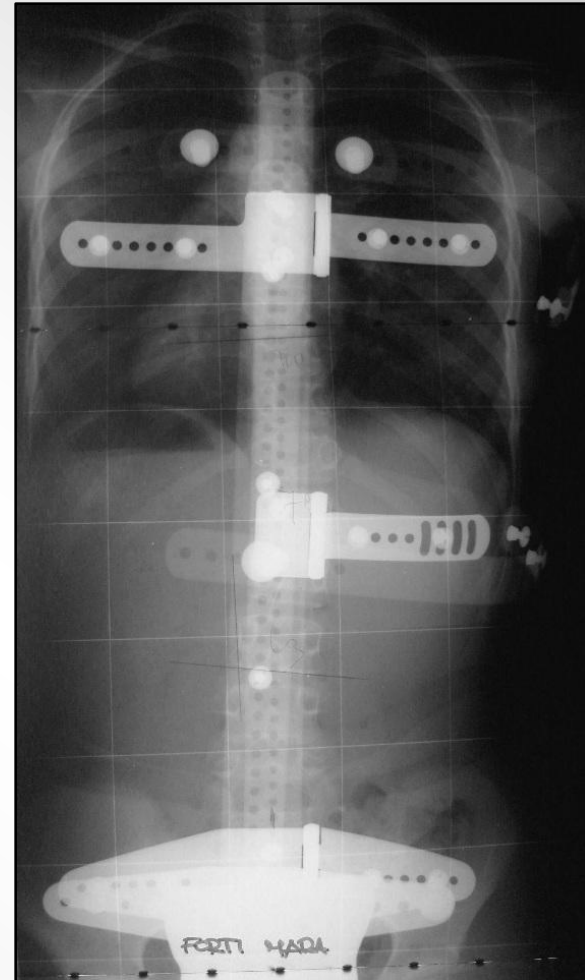




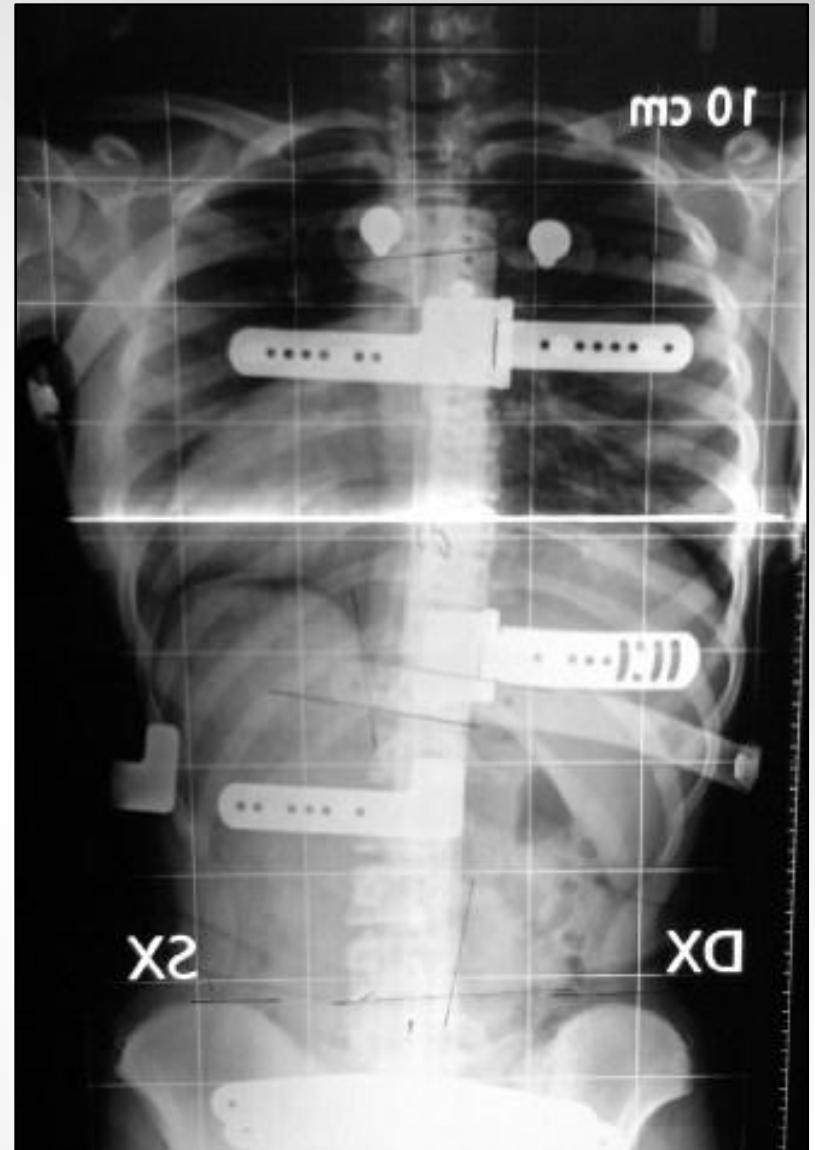






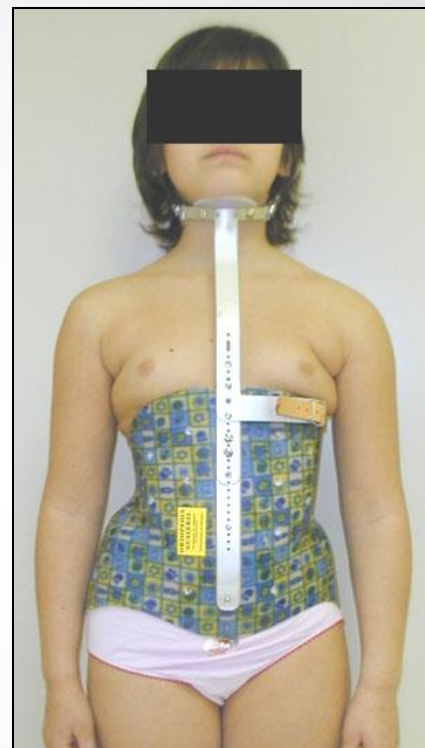


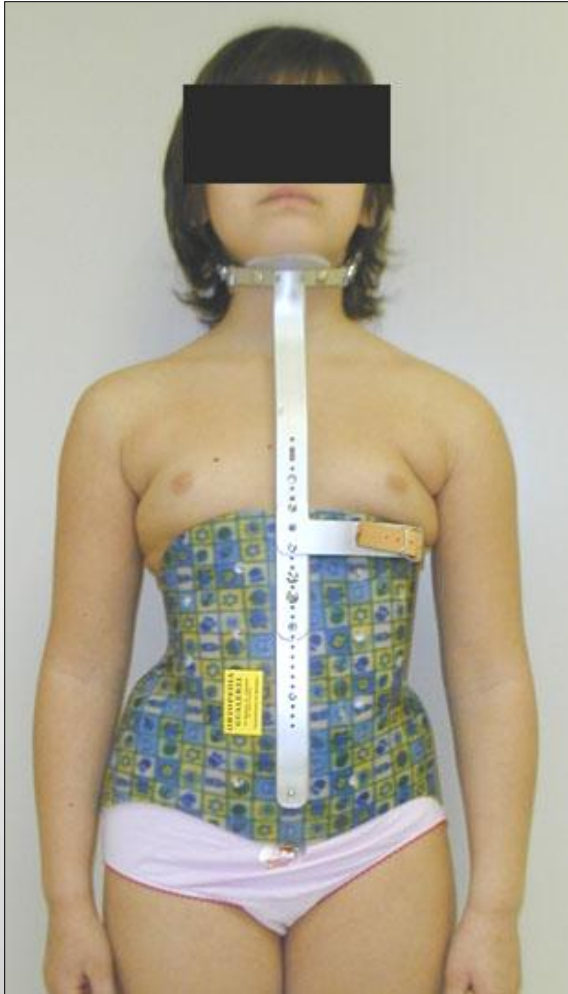




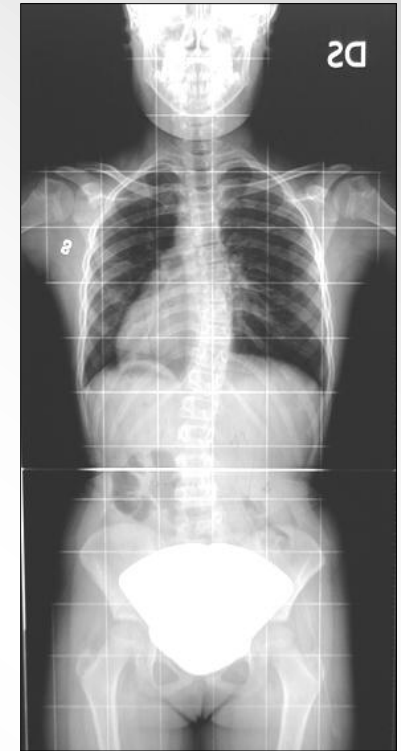
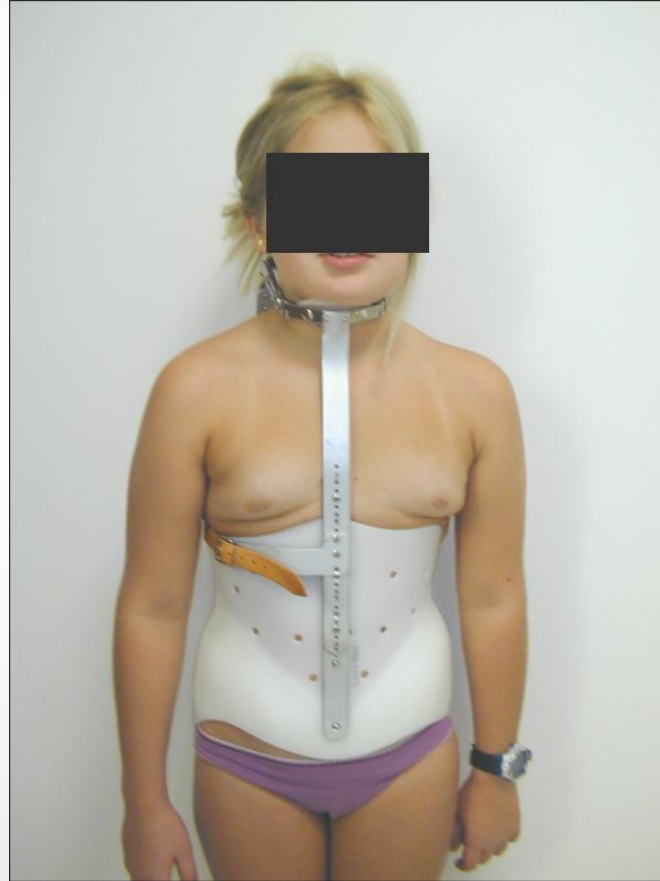
# Milwaukee

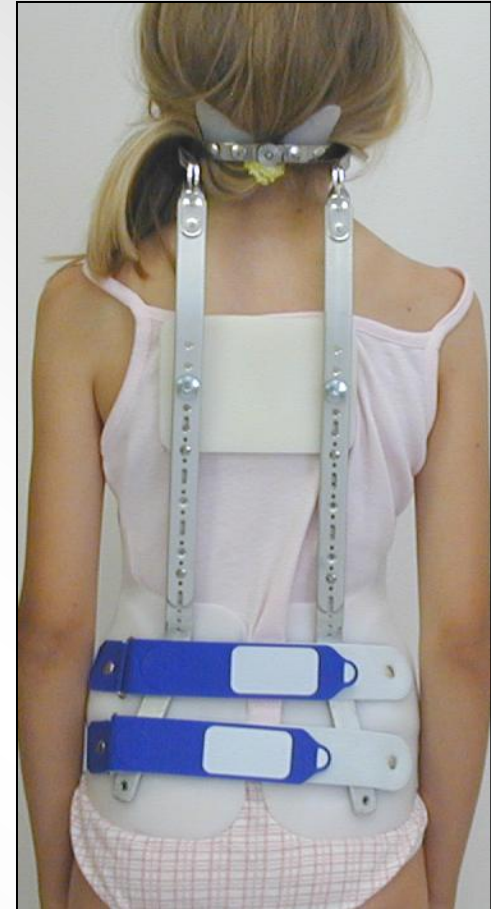
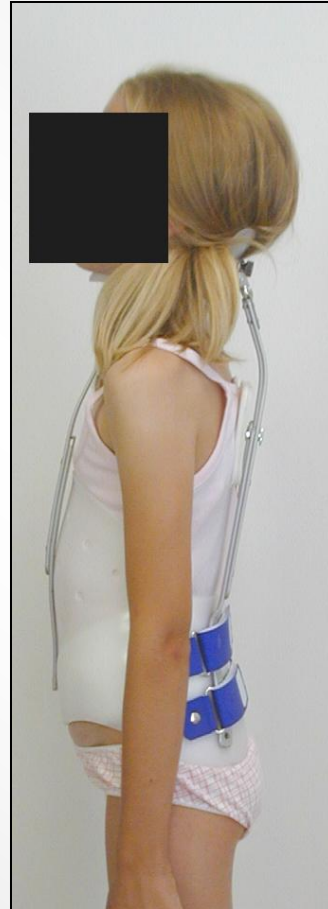
- Presa pelvica in polietilene
- Minerva metallica
- Utilizzo fino a 10/11 anni
- Aste e minerva in plastica in caso di utilizzo infantile

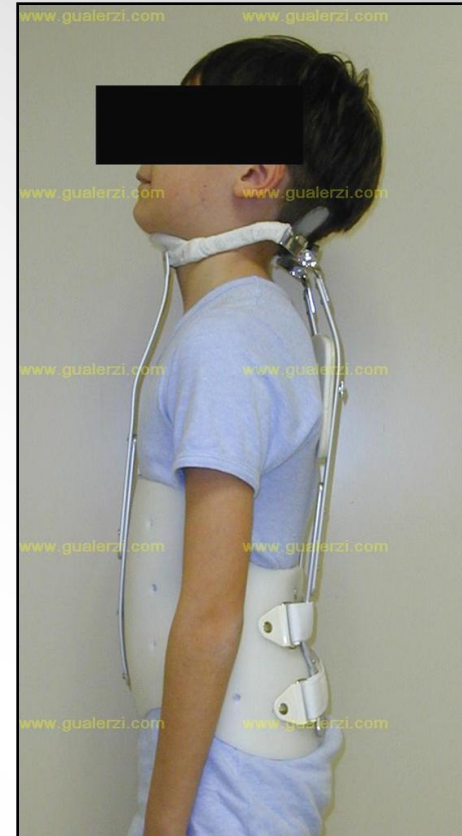
























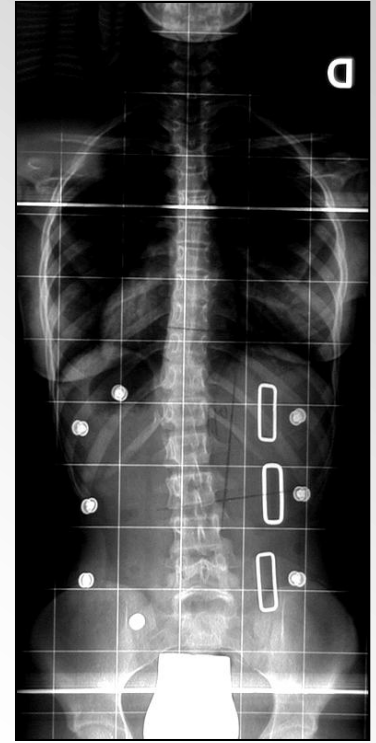
## Univalva Asimmetrico

- Ortesi monovalva asimmetrica in polietilene
- Applicazione di un cuscinetto pneumatico posto all'altezza dell'apice della scoliosi



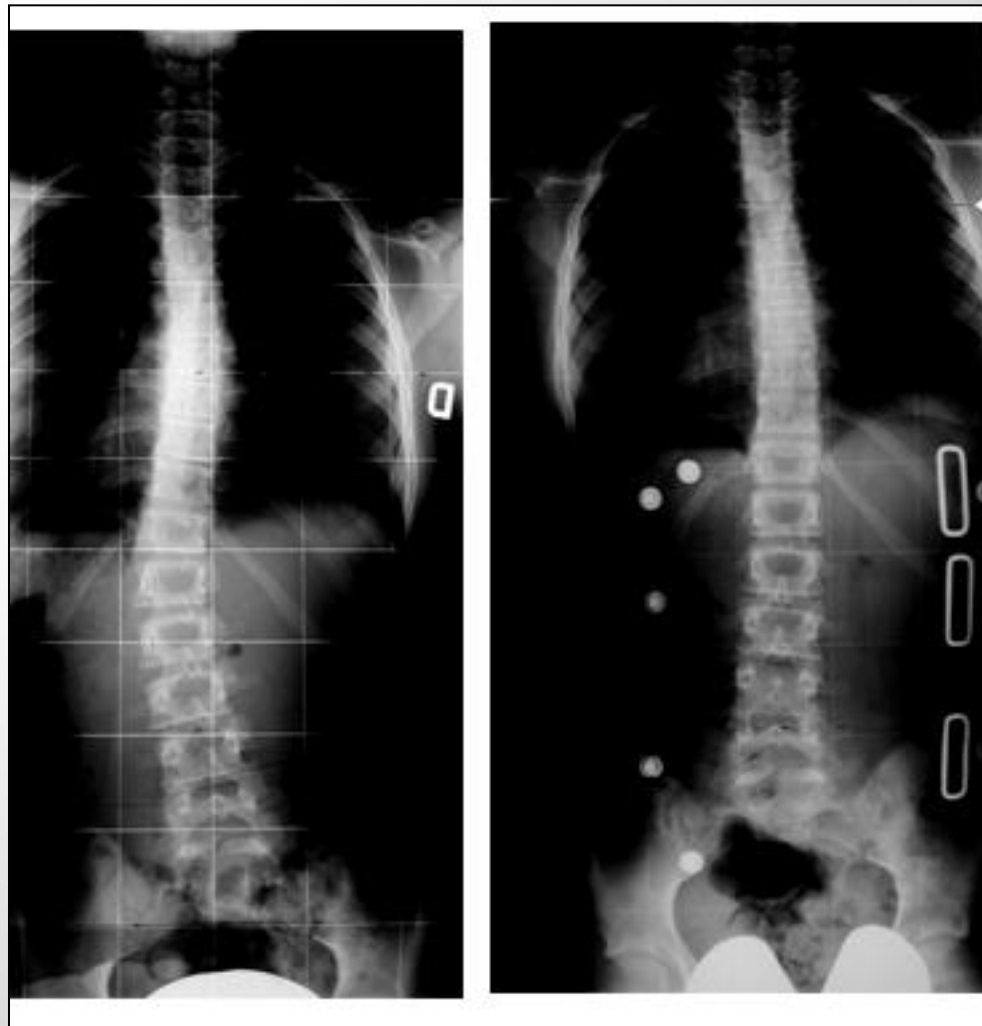


1



2

3

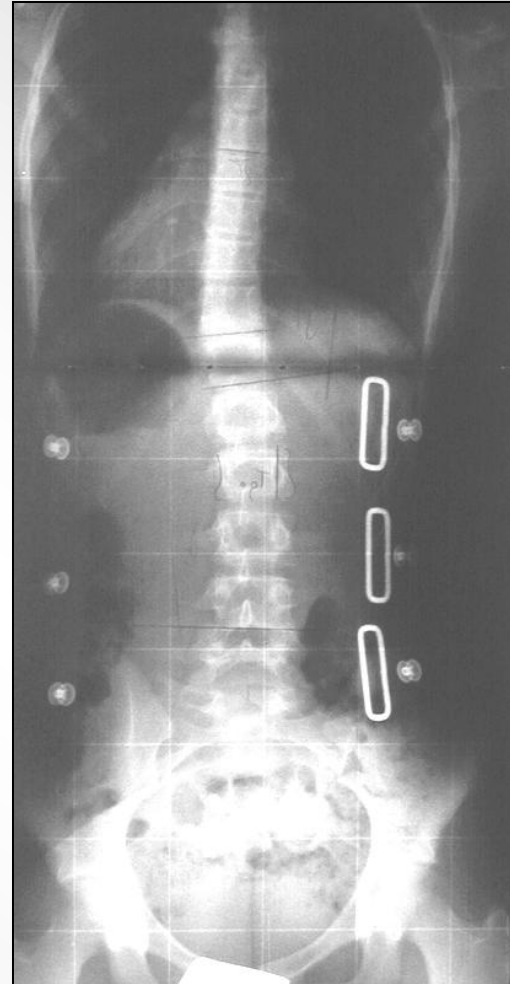




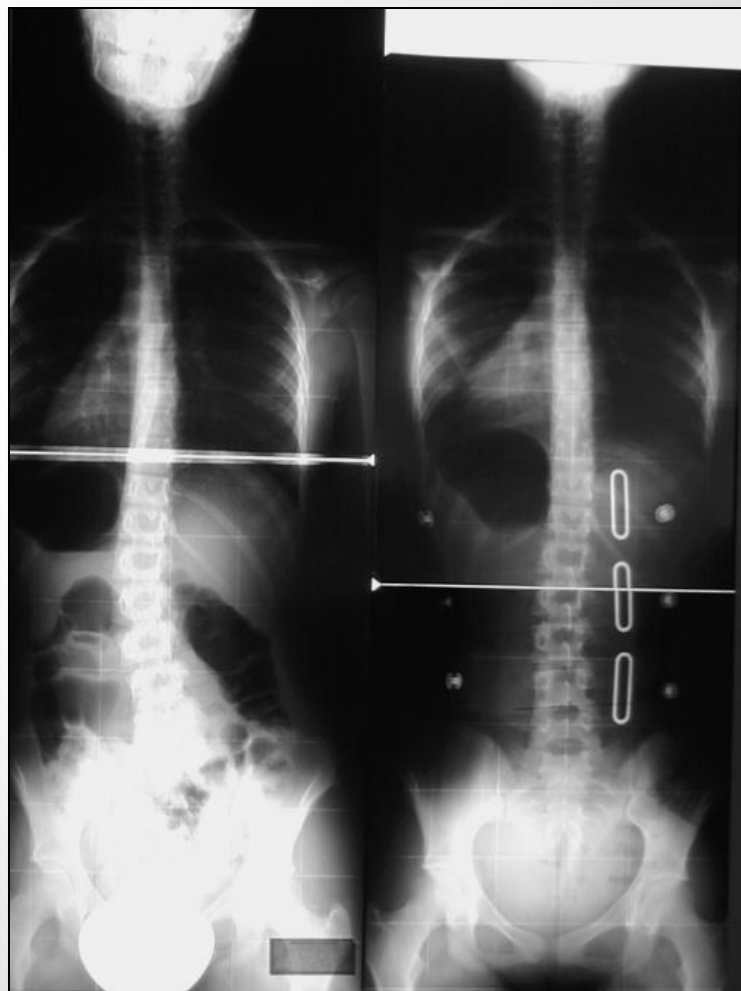
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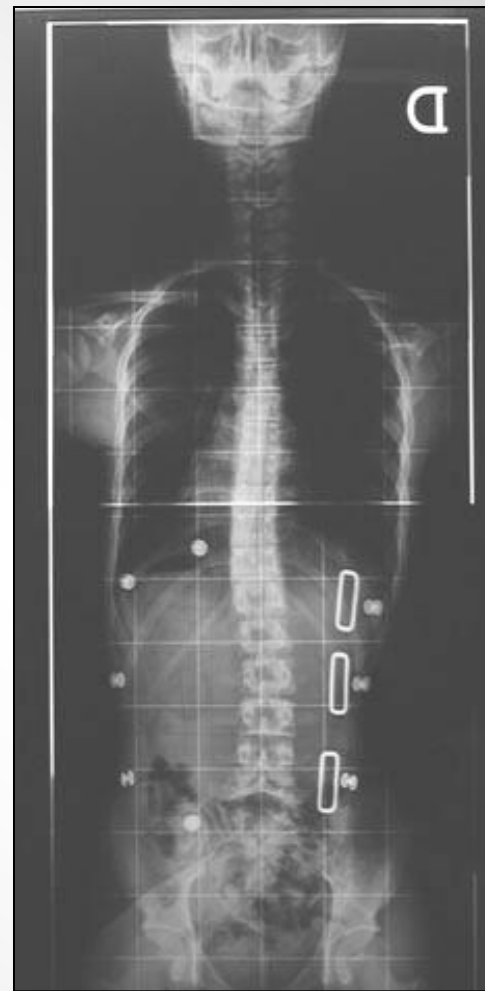
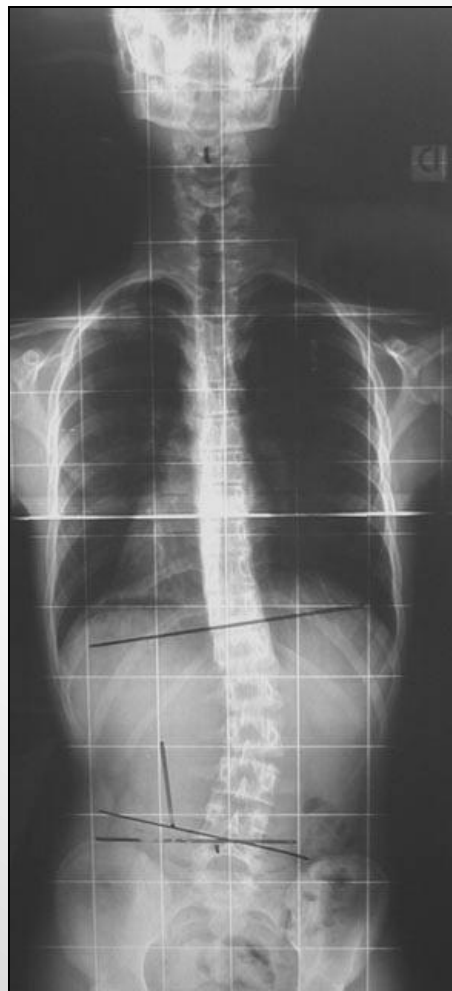
5



6



7









10





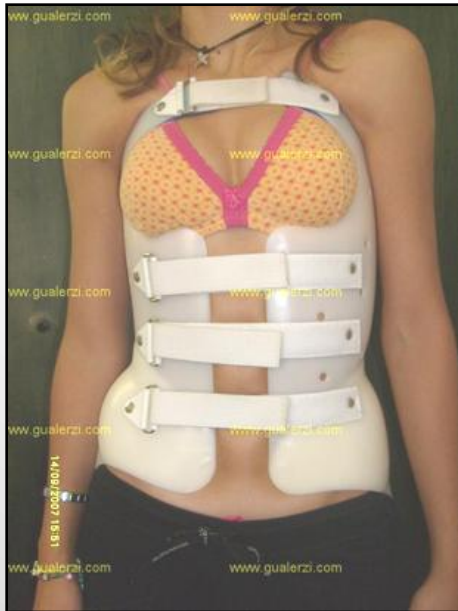


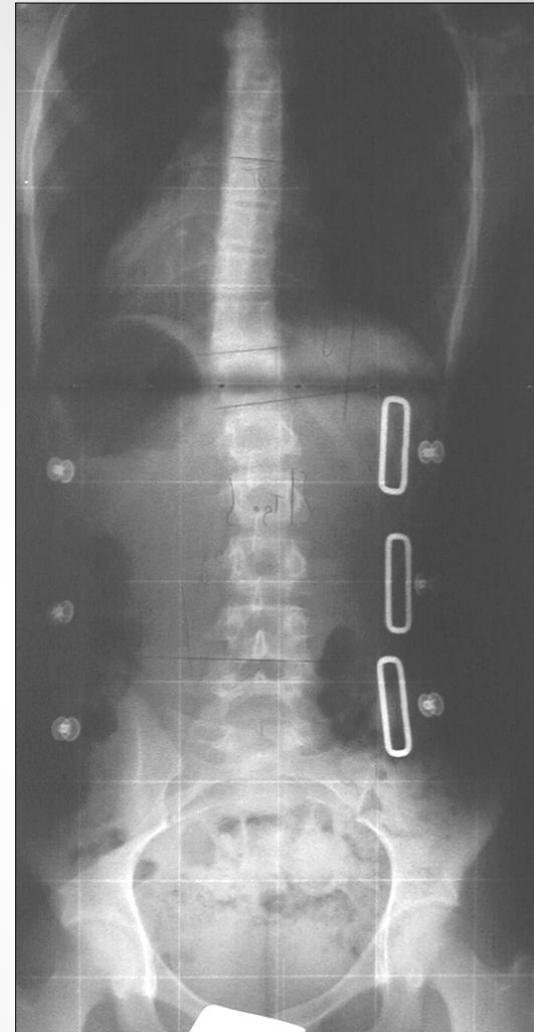
20/02/06 - 11°

12



19/02/07 - 19°





# Ipercifosi

-Ortesi bivalve in polietilene con appoggio sternoclaveare regolabile

-In casi particolari:

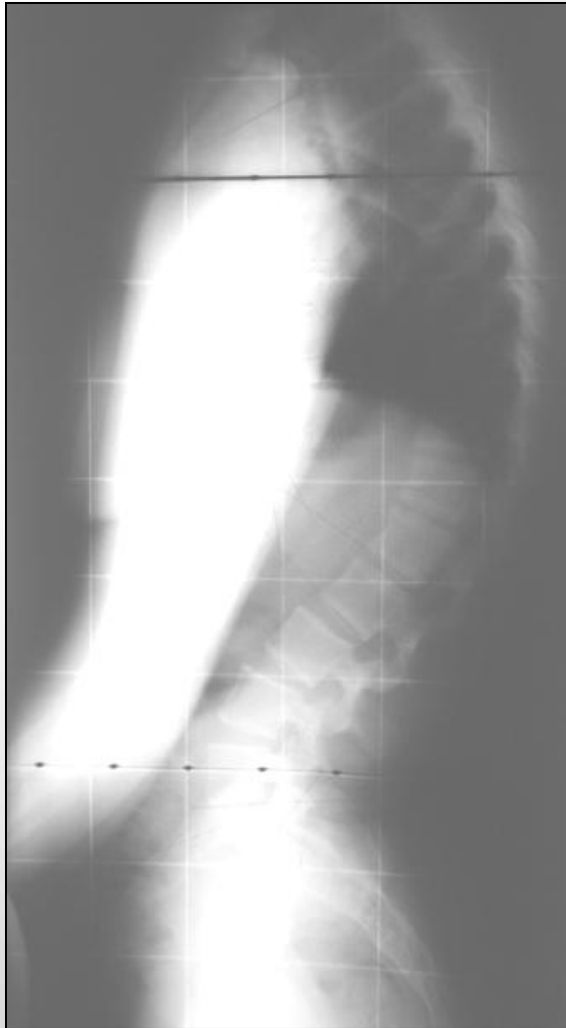
-utilizzo di cuscinetti pneumatici posti all'apice della cifosi





1



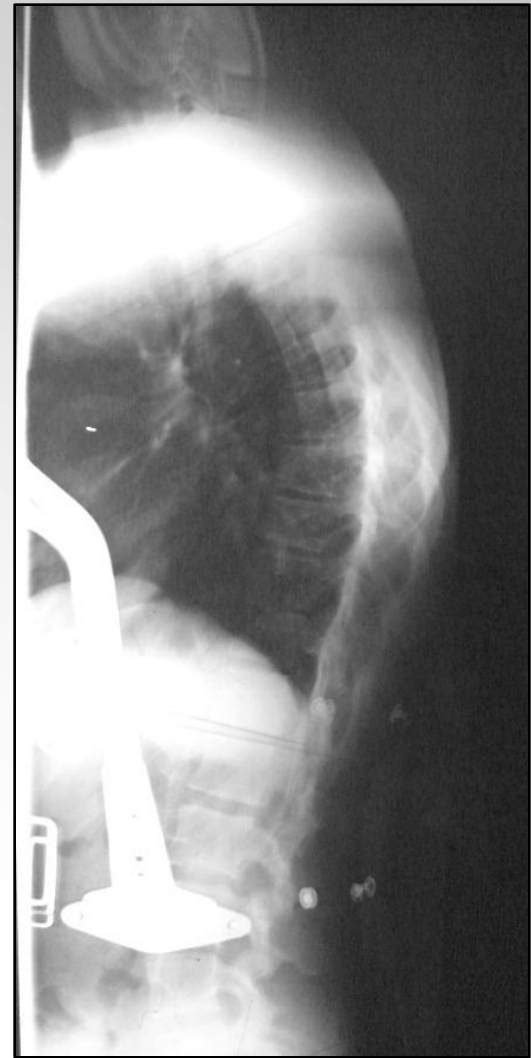












# Spondilolistesi

-Ortesi monovalva in polietilene

-Allacciatura anteriore

-*In casi particolari:*

-cuscinetto pneumatico localizzato sul punto dolente



1





# Pre-Operatori

- Ortesi polivalve in materiale termoplastico ad alta rigidità
- Valve orientabili
- Applicato prima della stabilizzazione chirurgica



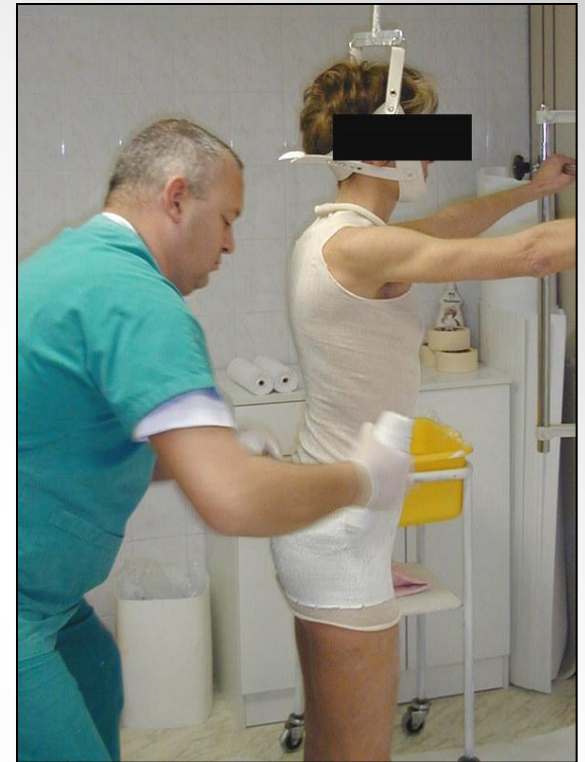


# IMPRONTA GESSATA

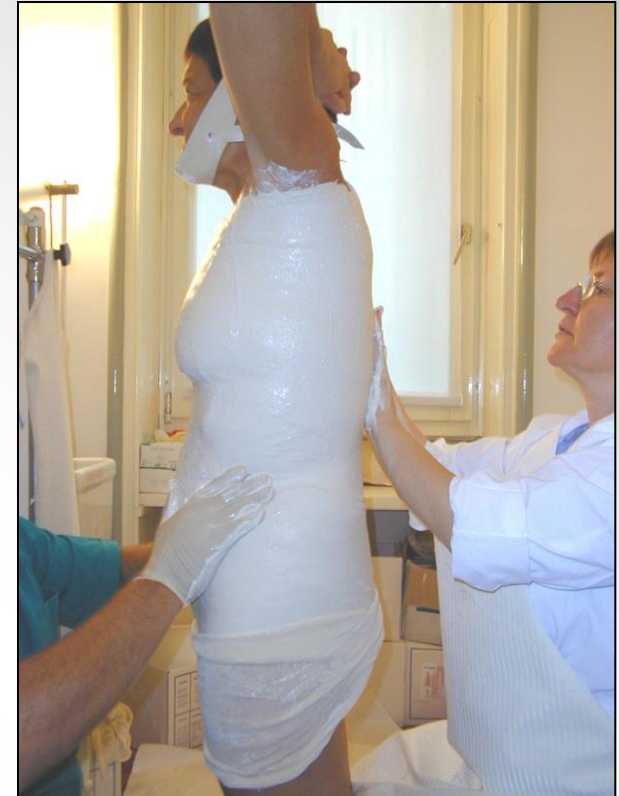


- Presca dell'impronta
- Lavorazione tradizionale

# Presca dell'Impronta

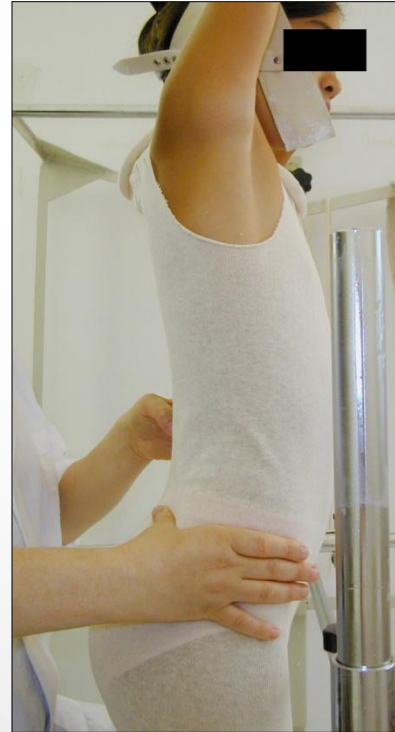






INDICE

INDICE IMPRONTA GESSATA



# Lavorazione Tradizionale

- Stilizzazione Bivalva
- Stilizzazione GTB
- Termoformatura GTB
- Stilizzazione Lionese

# Stilizzazione Bivalva





# Stilizzazione GTB



• [Termoformatura GTB](#)

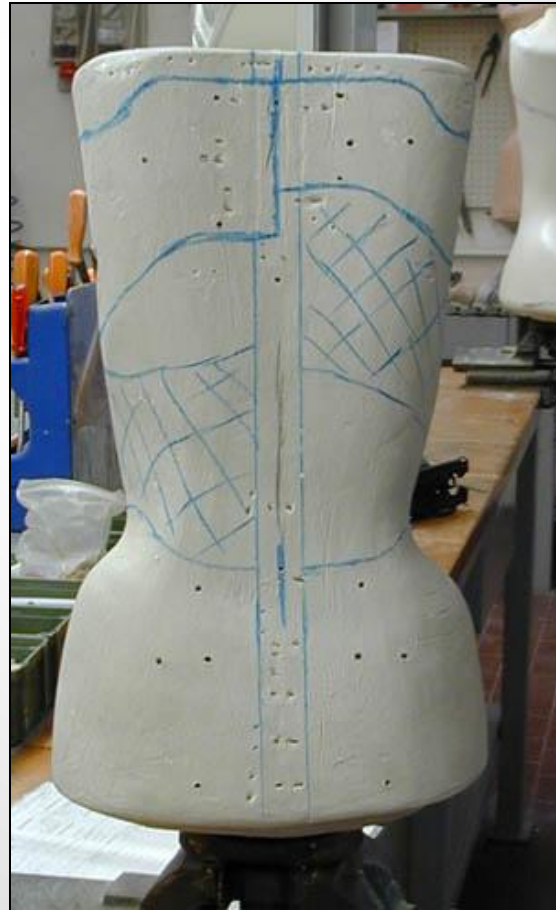
# Termoformatura GTB



# Stilizzazione Lionese



# Positivi Stilizzati

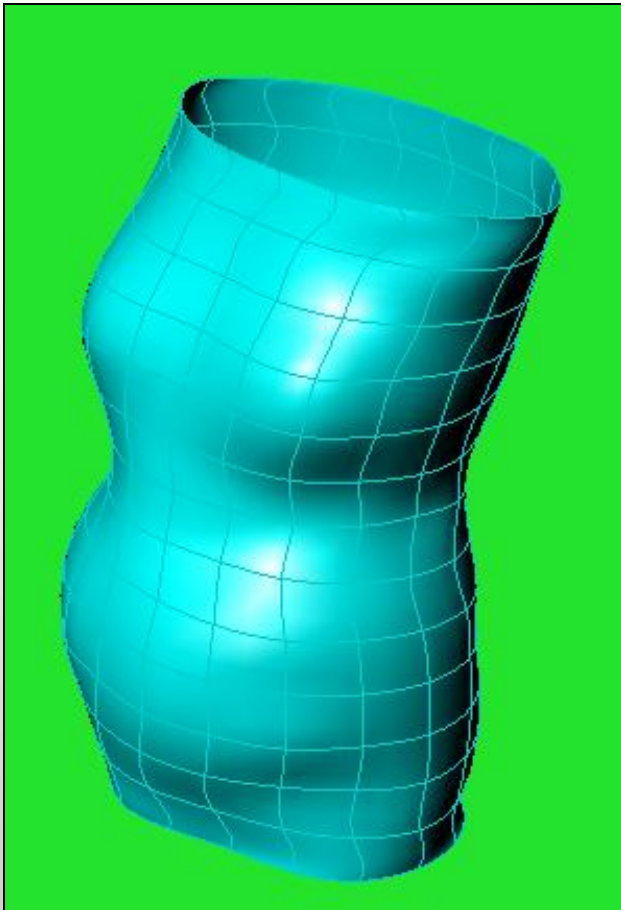








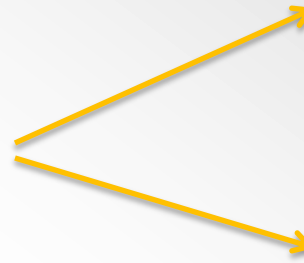
# IMPRONTA ELETTRONICA



- Acquisizione della forma
- Modellazione CAD CAM
- Fresatura



**METODICHE  
OTTICHE**



**LUCE STRUTTURATA**

**FOTOGRAMMETRIA**

**METODICHE  
LASER**



**PISTOLA LASER**

**METODICHE  
METRICHE**



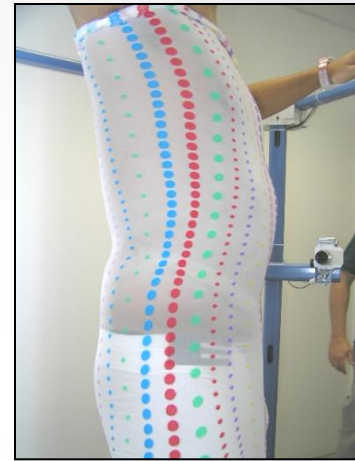
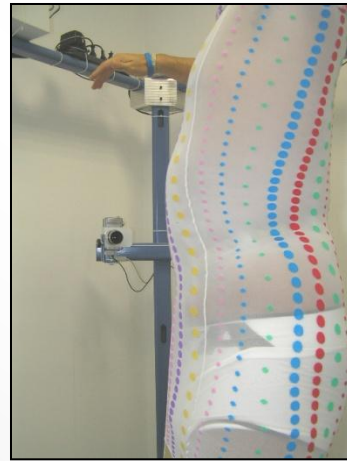
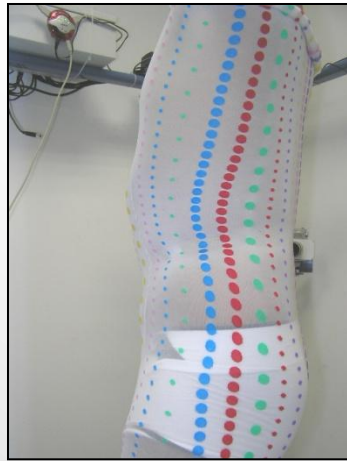
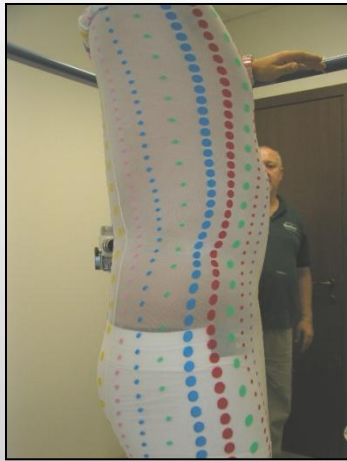
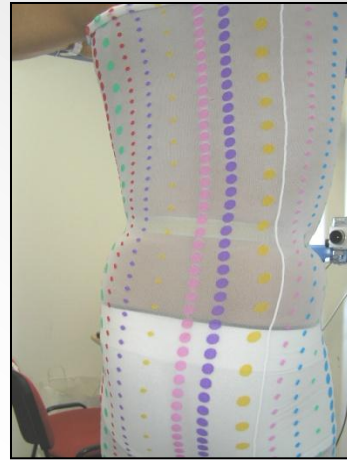
**SCHEDA MISURE**

# Acquisizione della forma

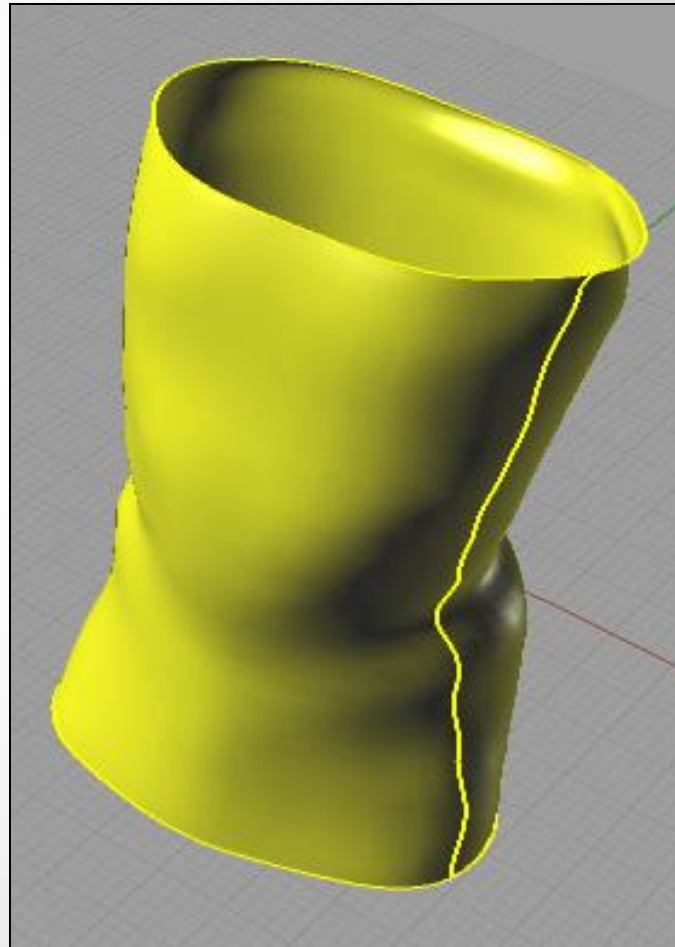


*Sistema di rilevazione fotogrammetrico, basato sul principio della visione stereo, atto a rilevare la parte del tronco e altri distretti del corpo umano, in una unica fase, e opportuni programmi di interpretazione che consentono la ricostruzione di un modello tridimensionale a partire da una serie di immagini digitali bidimensionali*

INDICE IMPRONTA ELETTRONICA



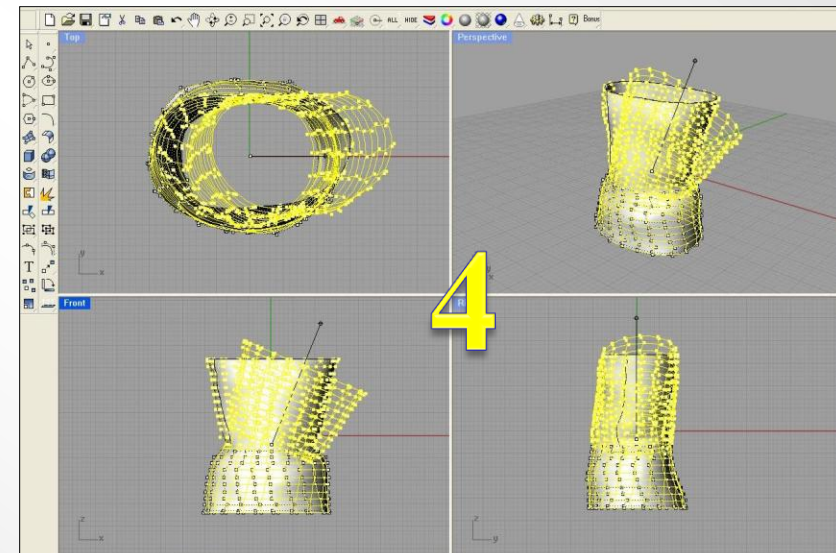
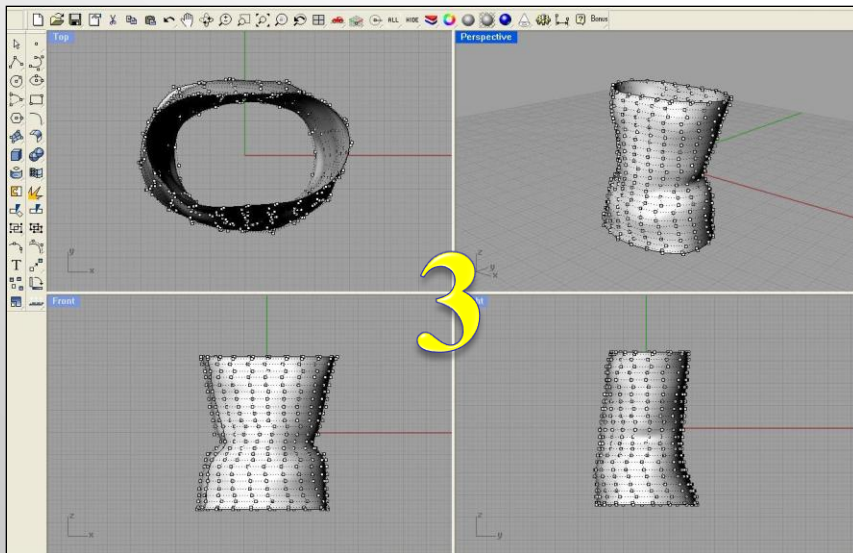
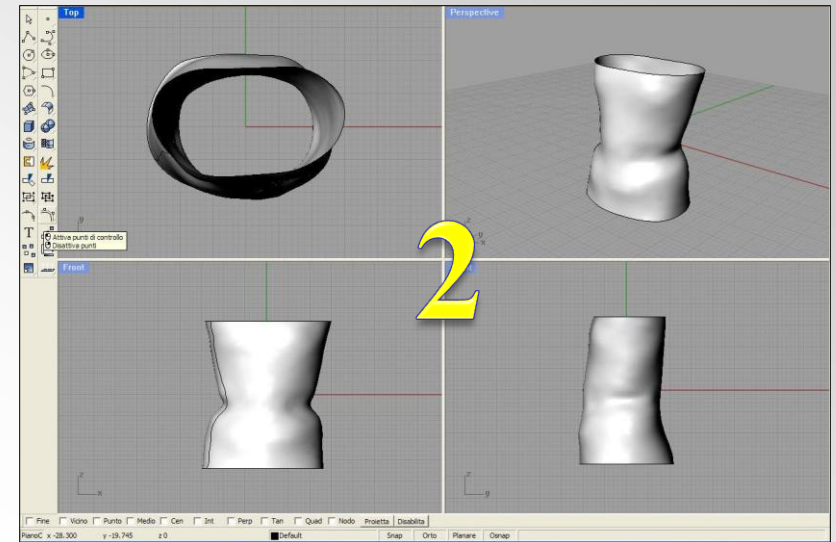
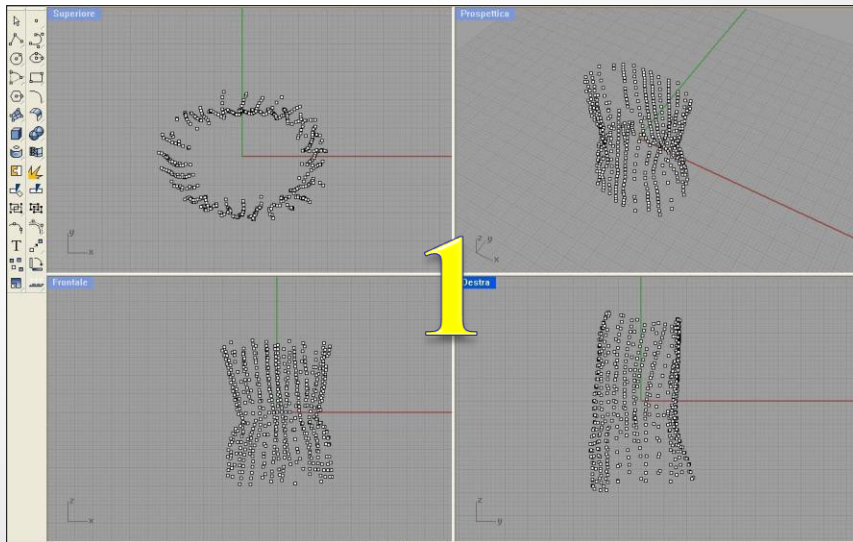
Lo scatto avviene in circa un secondo

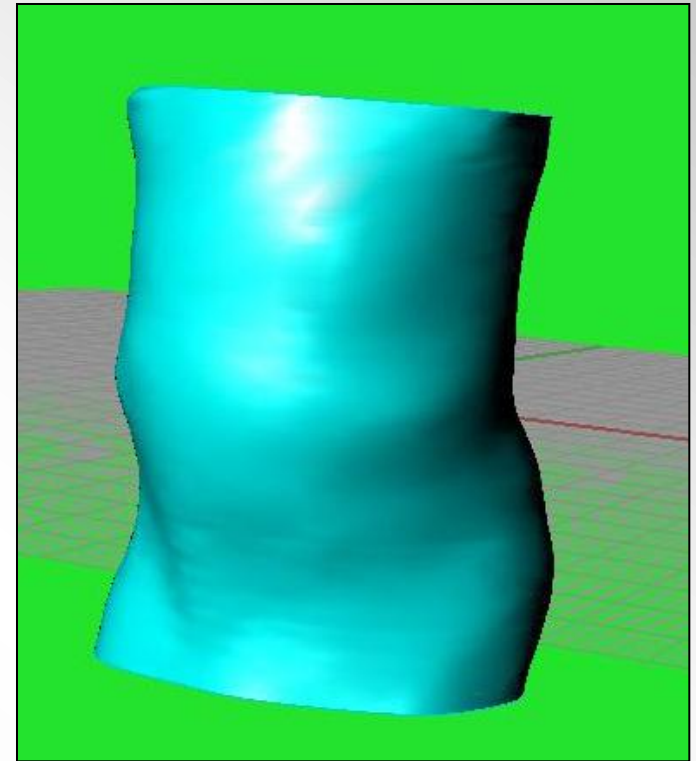
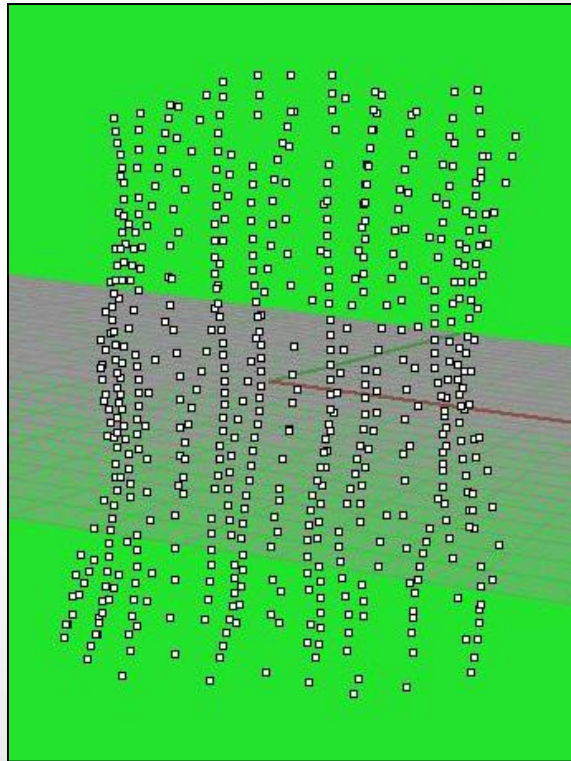


**Superficie ottenuta**

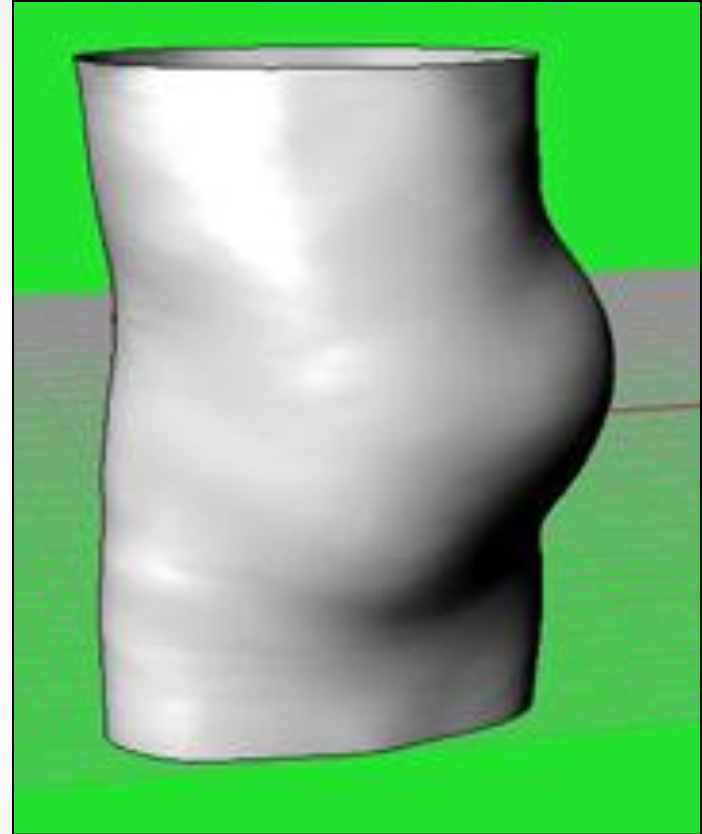


## INDICE IMPRONTA ELETTRONICA



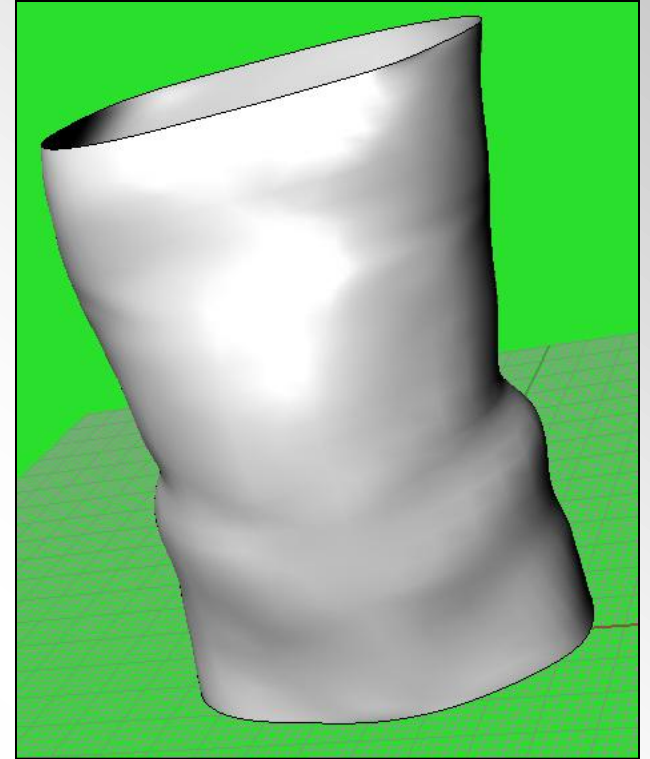
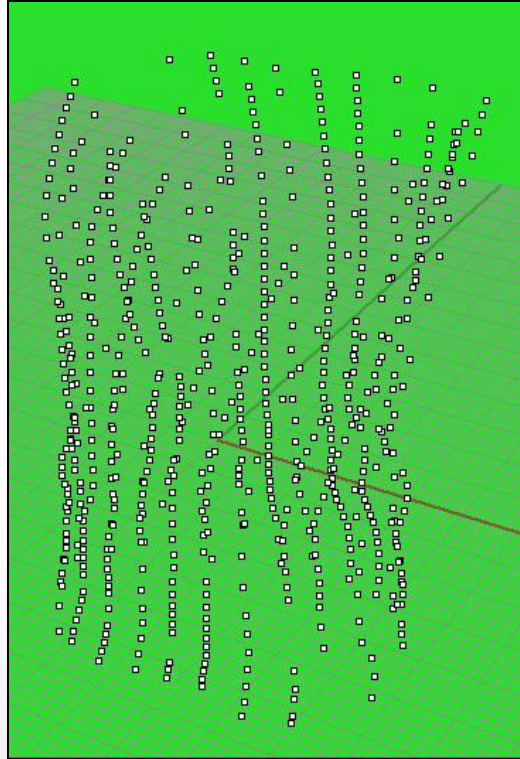


Dallo scatto il software evidenzia i punti e ricostruisce la superficie



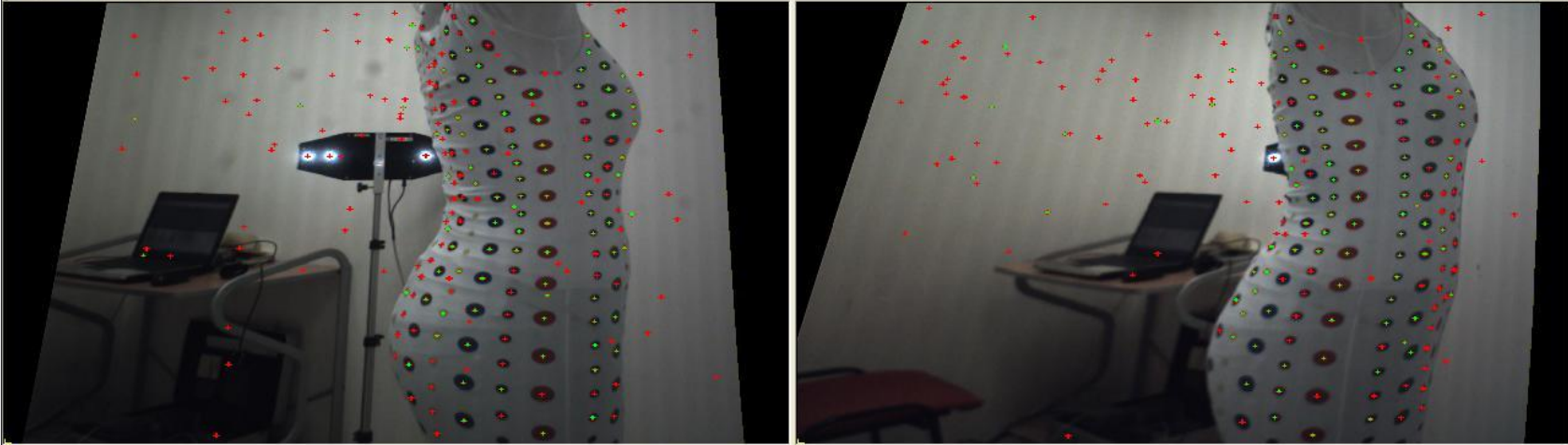
Paziente al quale sono state asportate le costole; la ricostruzione evidenzia con la massima precisione la deformità







Senza titolo - ORTOGRAF



Annulla      Prossima      Rifai

SCATTI:  ?  ?  ?  ?  ?  ?  ?  ?  ?  ?  ?

CALIBRAZIONE DELLA COPPIA:

A      B      C      D

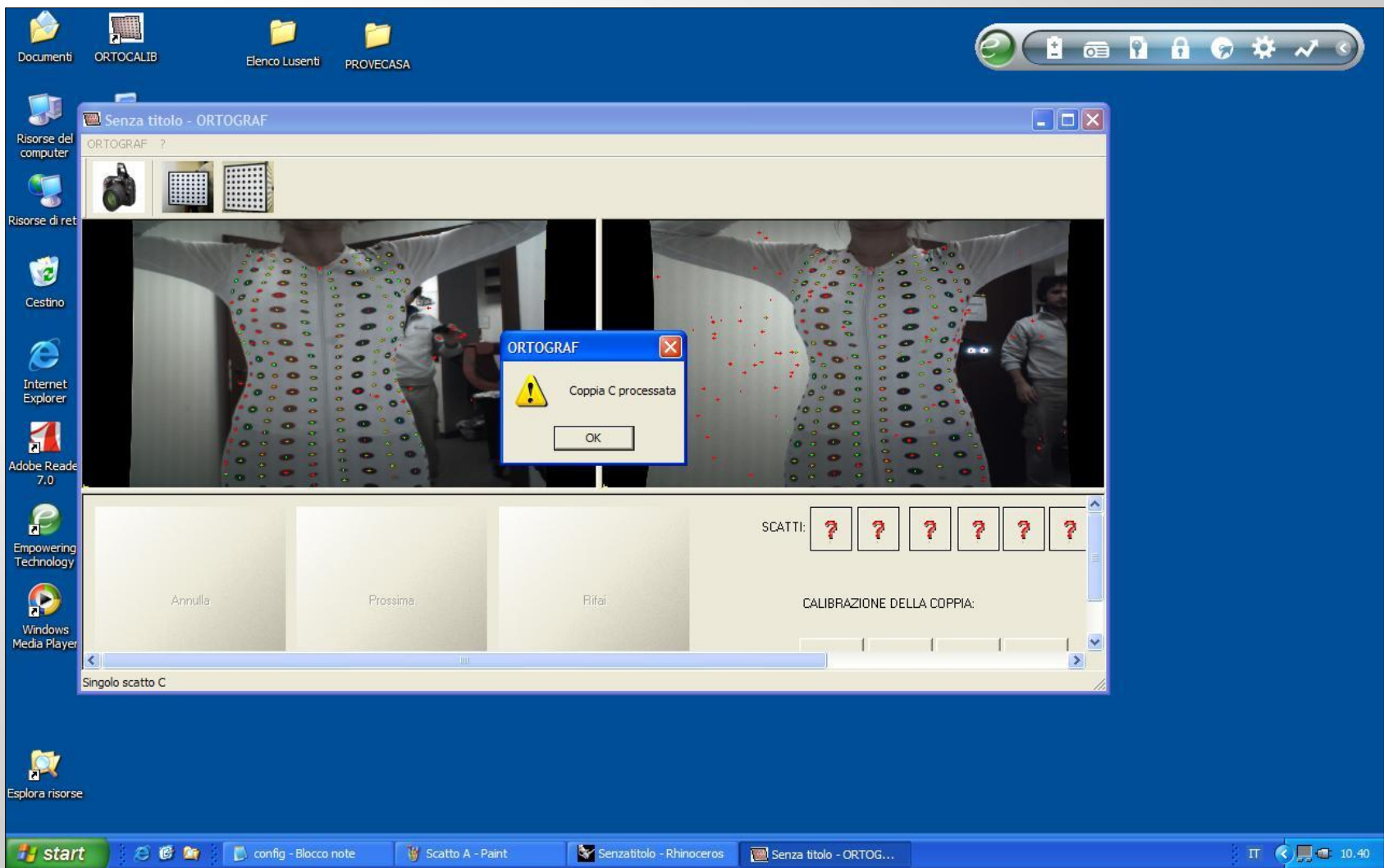
Singolo scatto B

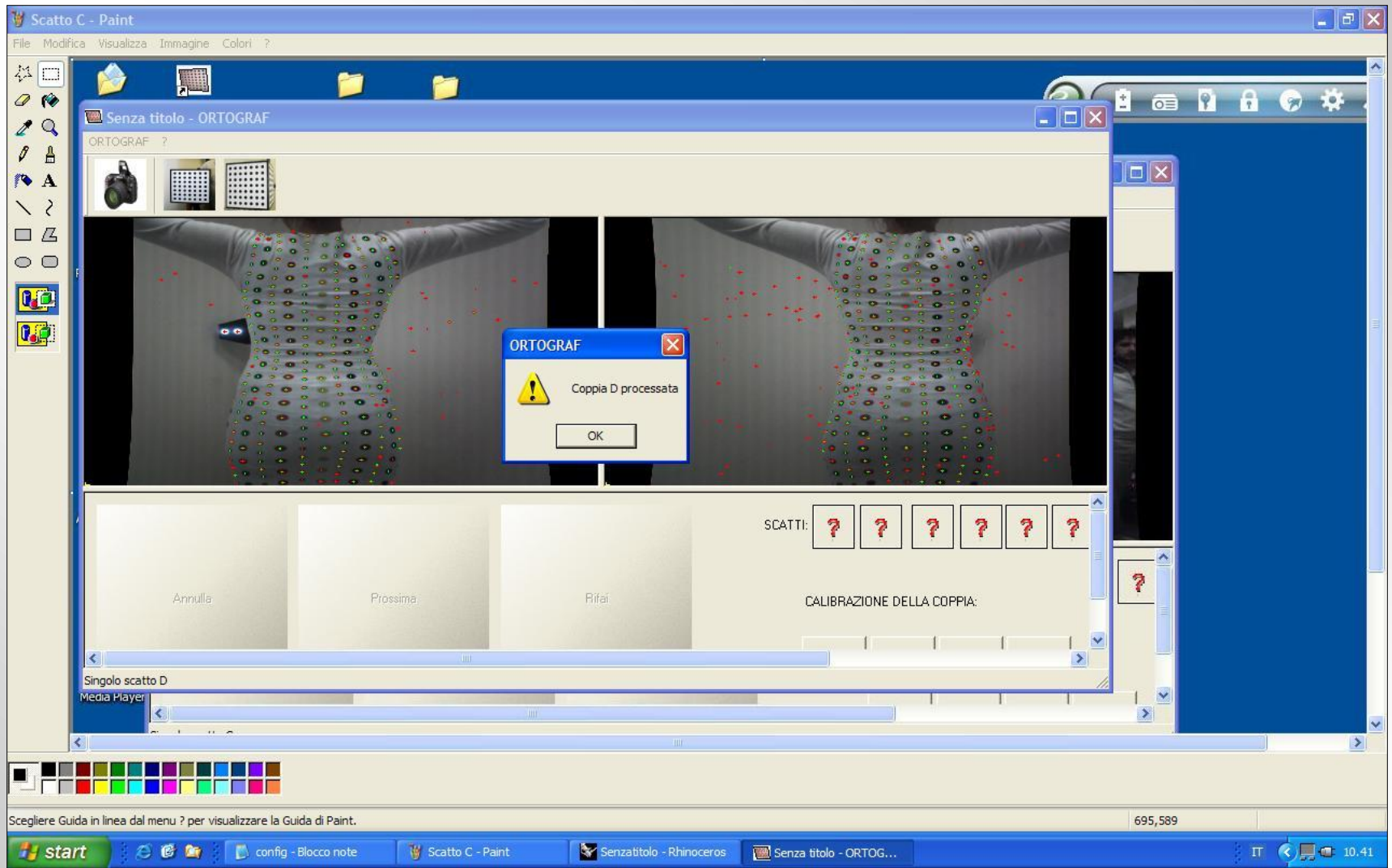
start      config - Blocco note      Scatto B - Paint      Senza titolo - Rhinoceros      Senza titolo - ORTOG...      IT      10.39

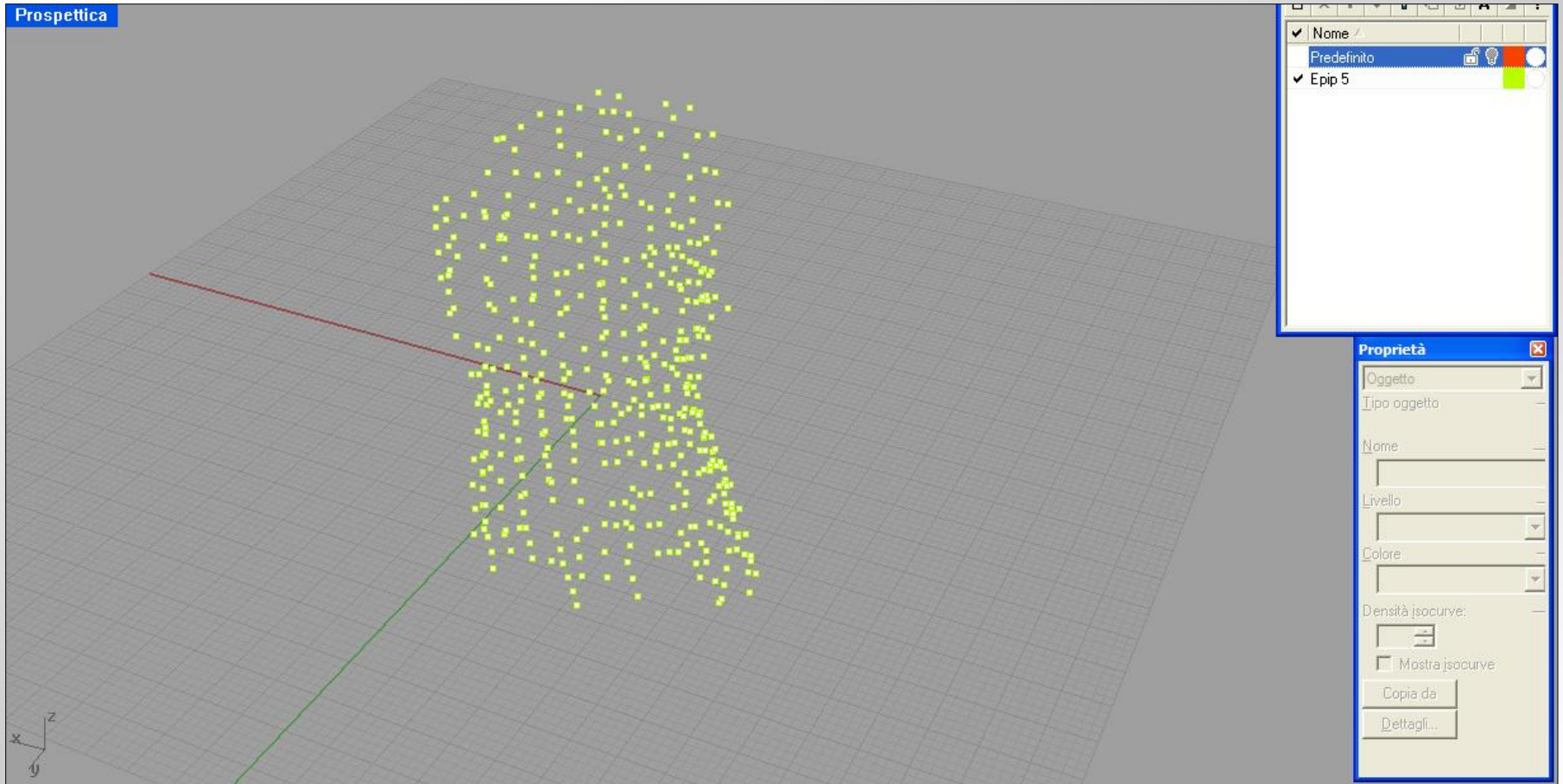
The screenshot displays the ORTOGRAF software interface. At the top, the window title is "Senza titolo - ORTOGRAF". Below the title bar, there are three icons: a camera, a grid, and a 3D model. The main area shows a 3D model of a human torso with numerous colored markers (red, green, yellow) and a central dialog box. The dialog box has a blue header with the text "ORTOGRAF" and a yellow warning icon. The main text in the dialog box reads "Coppia B processata" and there is an "OK" button at the bottom.

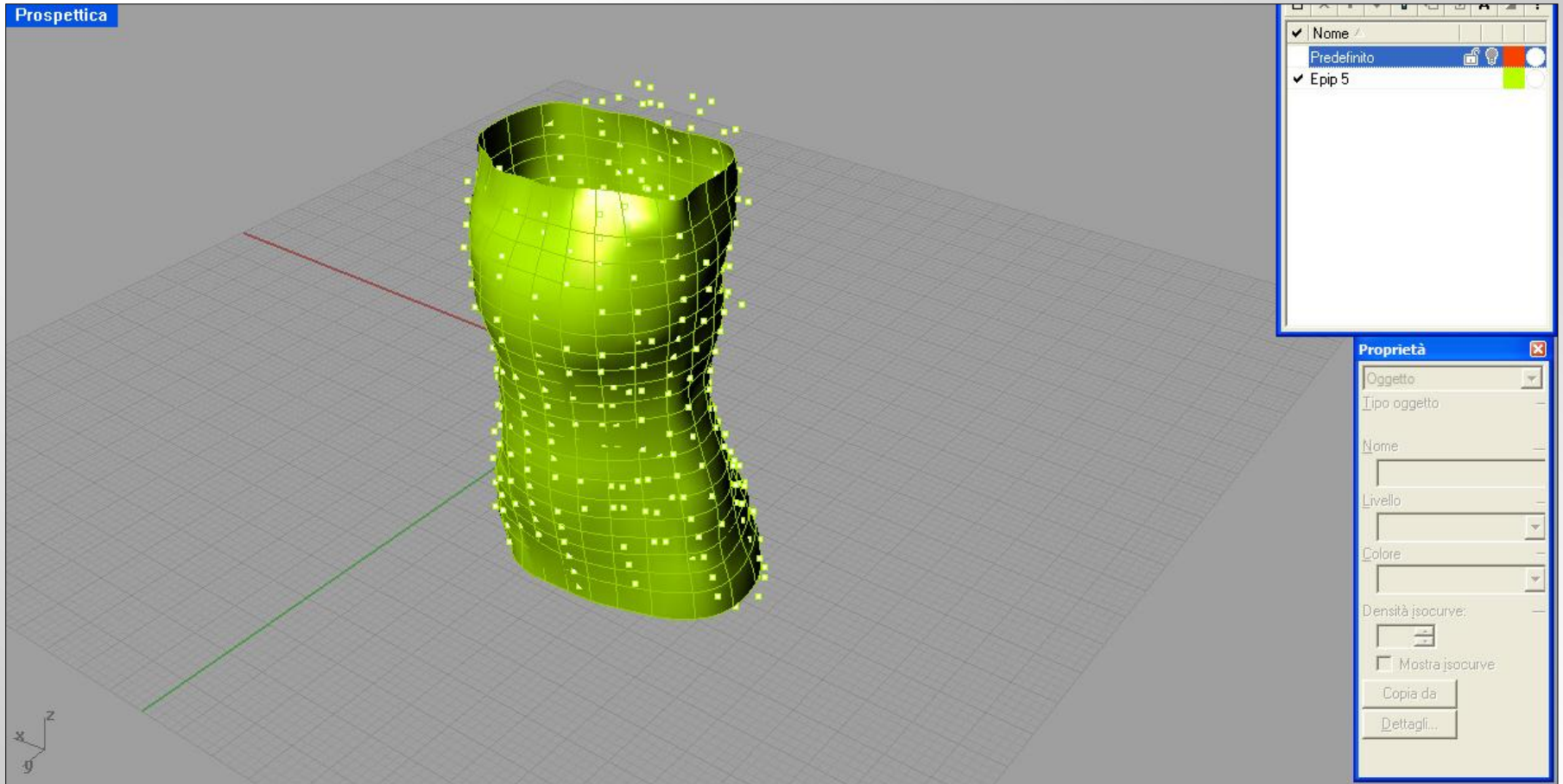
Below the 3D model, there are three large buttons labeled "Annulla", "Prossima", and "Ritai". To the right of these buttons, there is a row of 12 boxes, each containing a red question mark, labeled "SCATTI:". Below this row, there is a section labeled "CALIBRAZIONE DELLA COPPIA:" with four buttons labeled "A", "B", "C", and "D".

At the bottom left of the interface, the text "Singolo scatto B" is visible. The Windows taskbar at the bottom shows the Start button, several open applications (including "ORTHO\_AD3\_CALIB", "config - Blocco note", "Senza titolo - ORTOG...", and "Scatto Cubo - Paint"), and the system tray with the date and time "10.34".



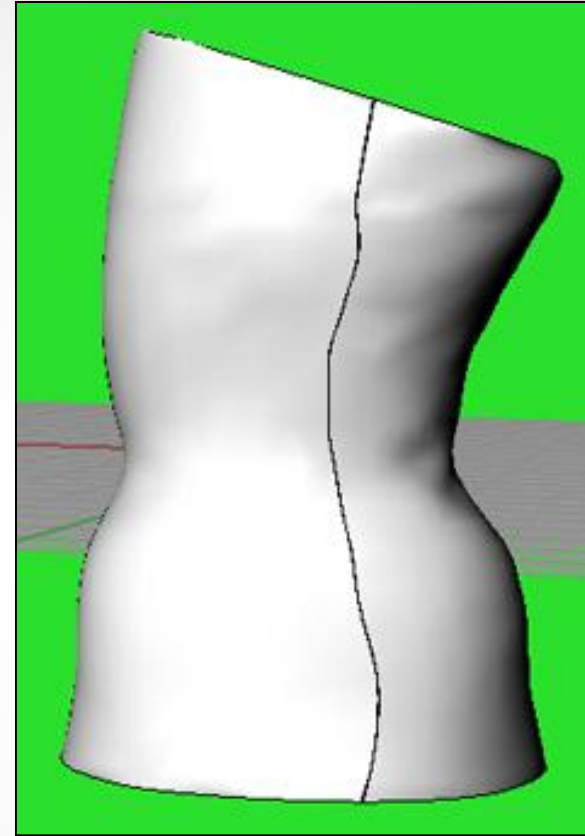
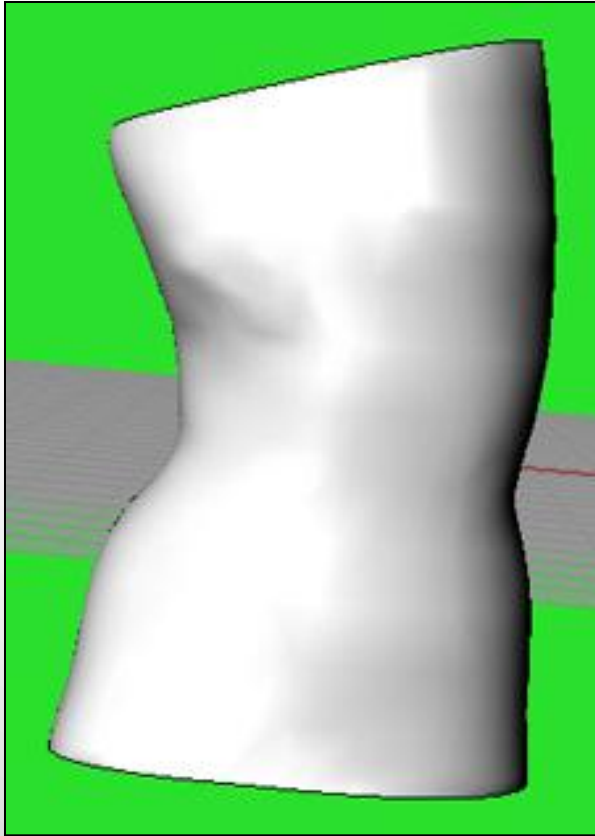






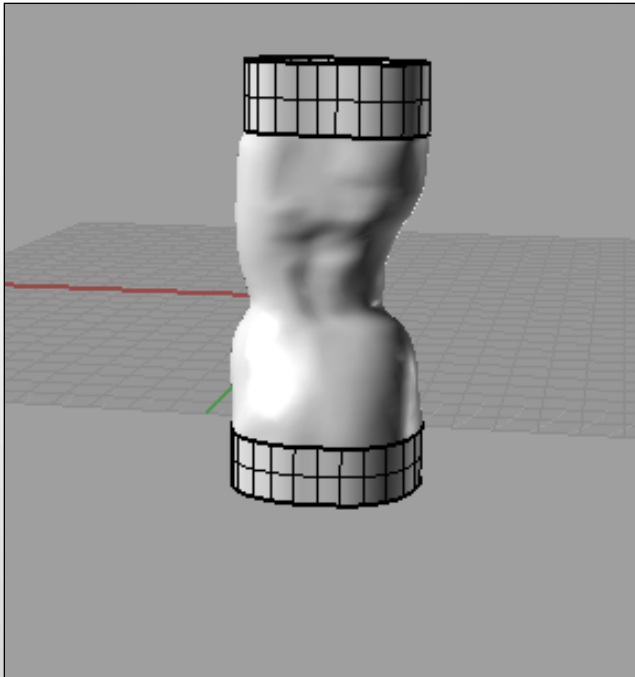




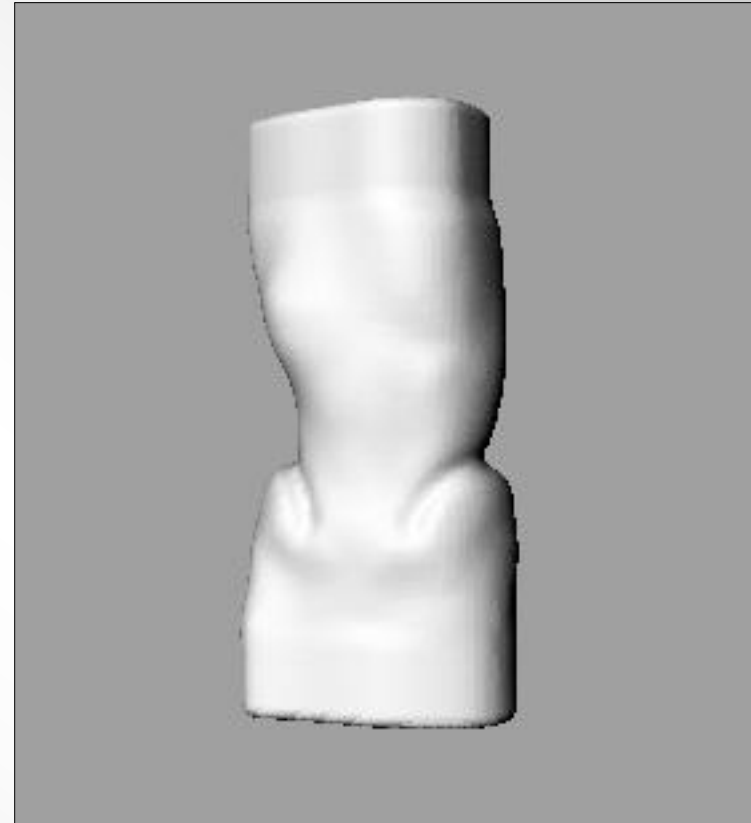


Impronta effettuata in posizione di ipercorrezione

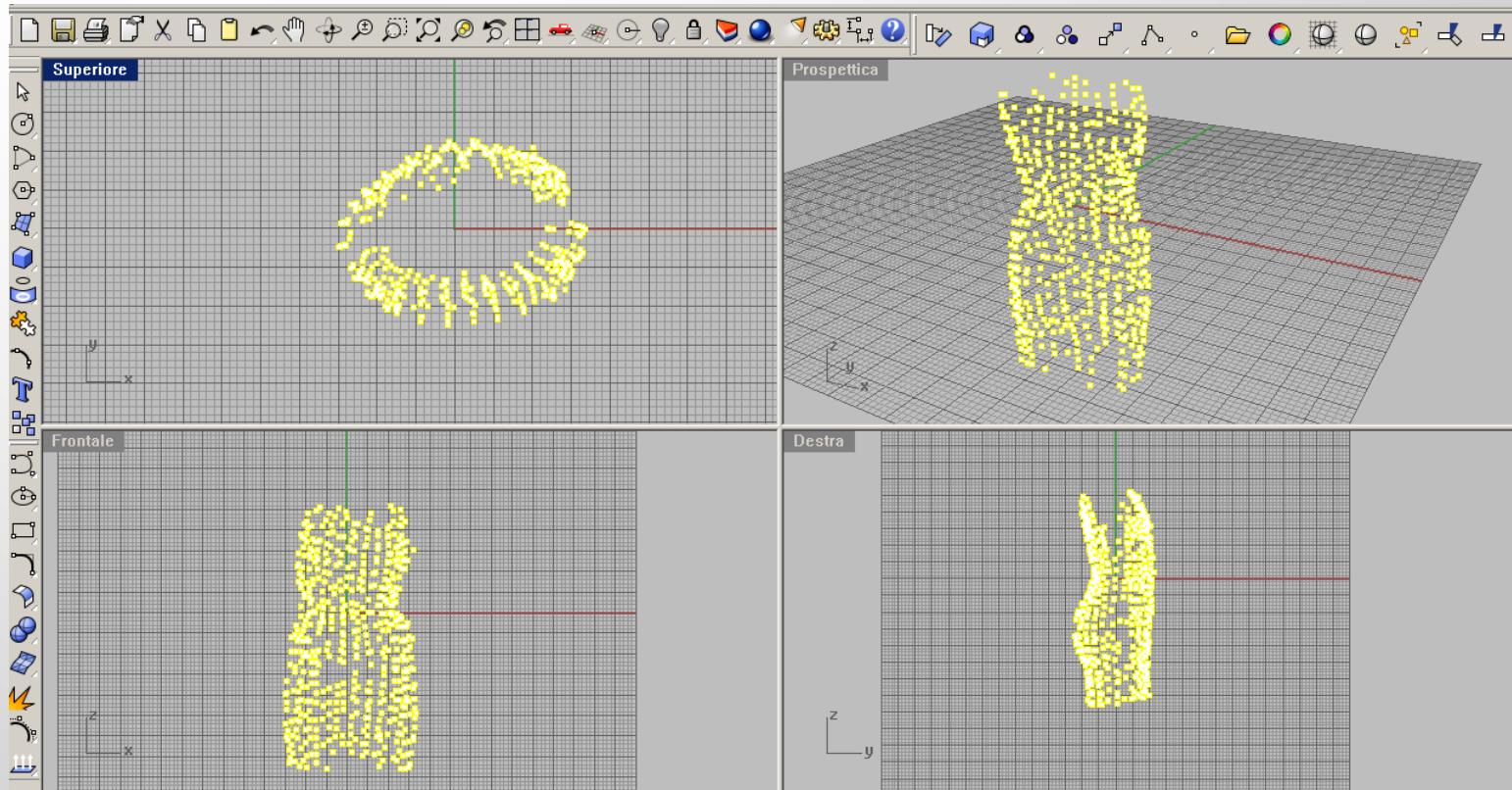
*Modello ottenuto dal CAD*



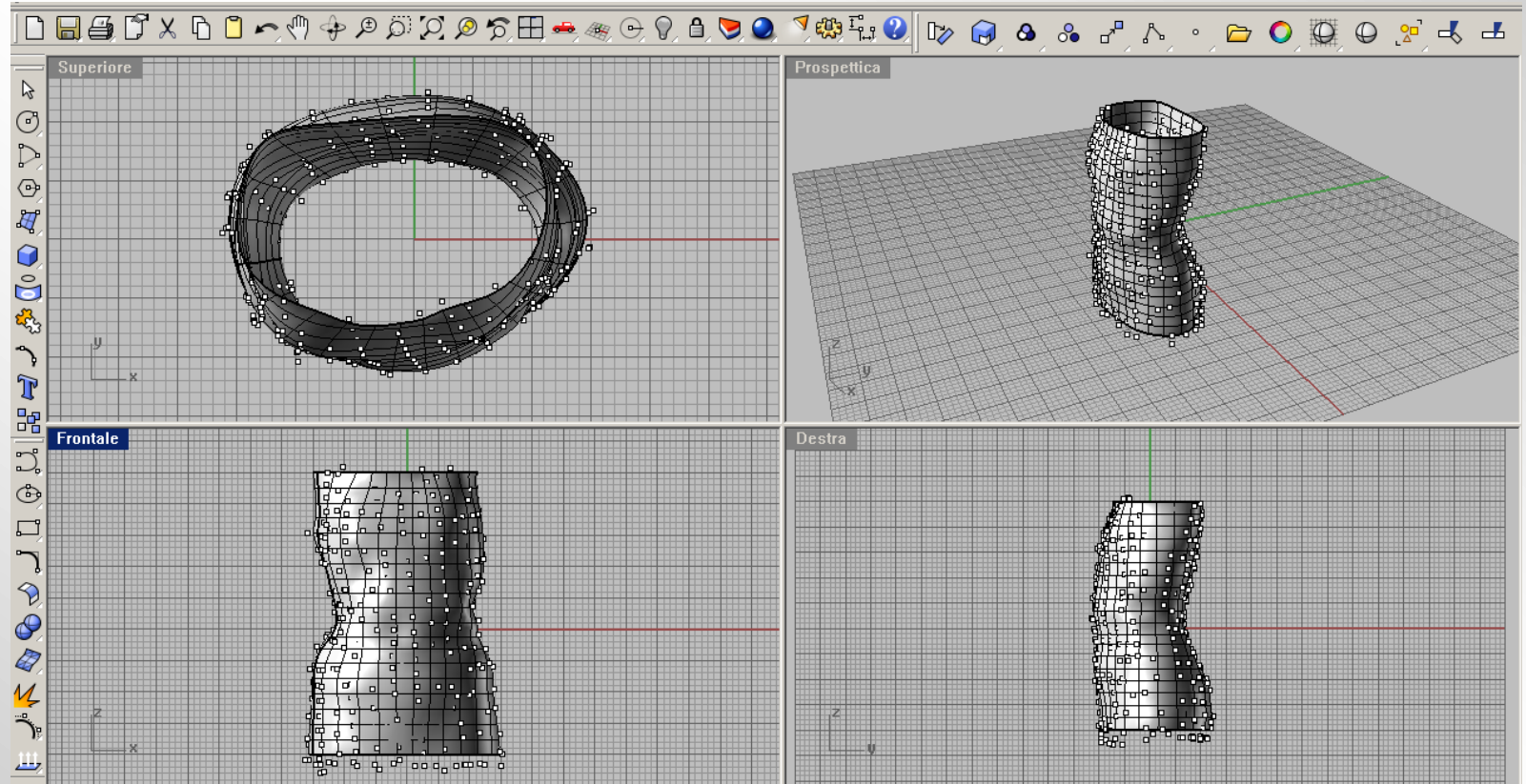
*Modello ottenuto dal modellatore*



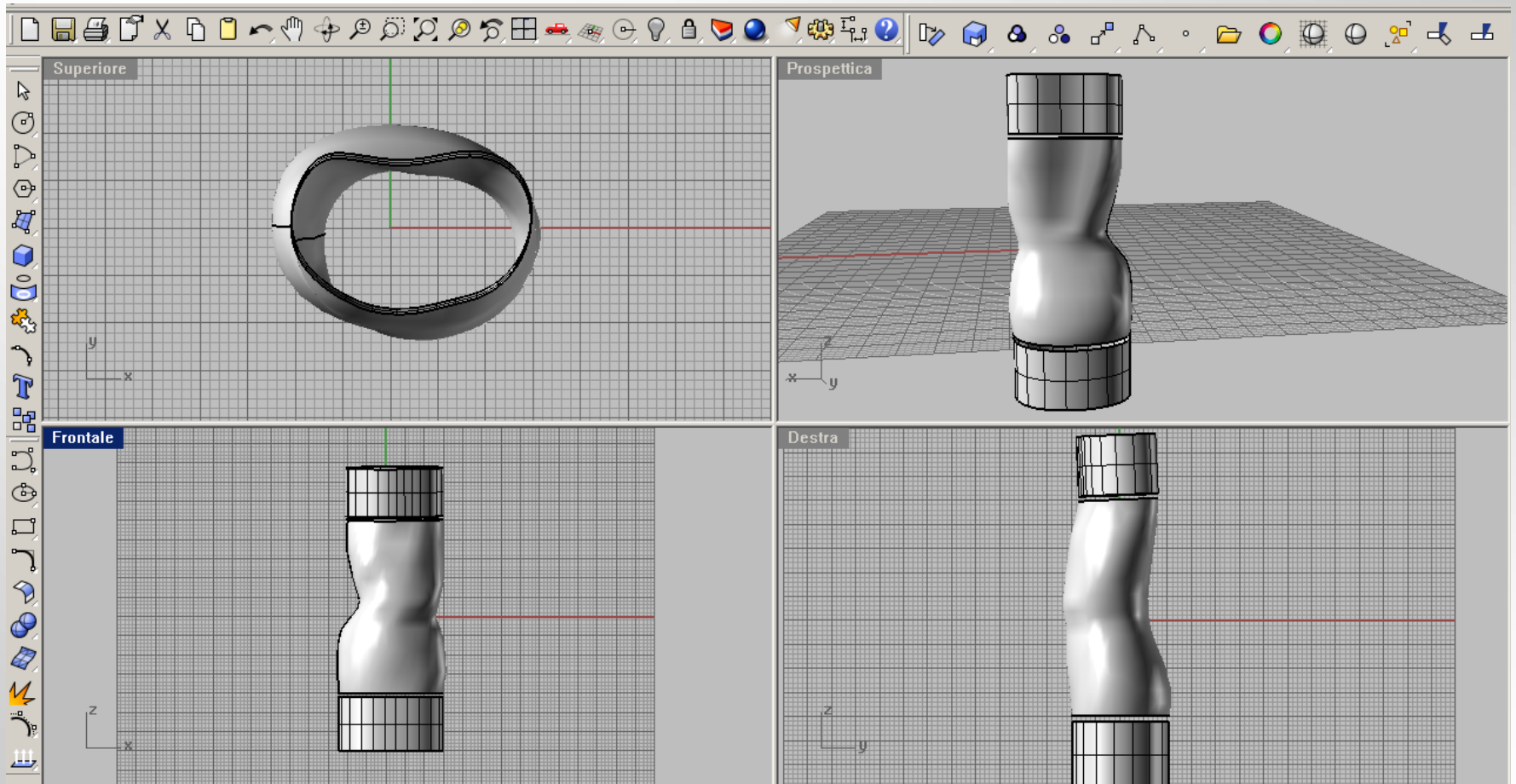
# *Importazione dei punti dal sistema di acquisizione al CAD*



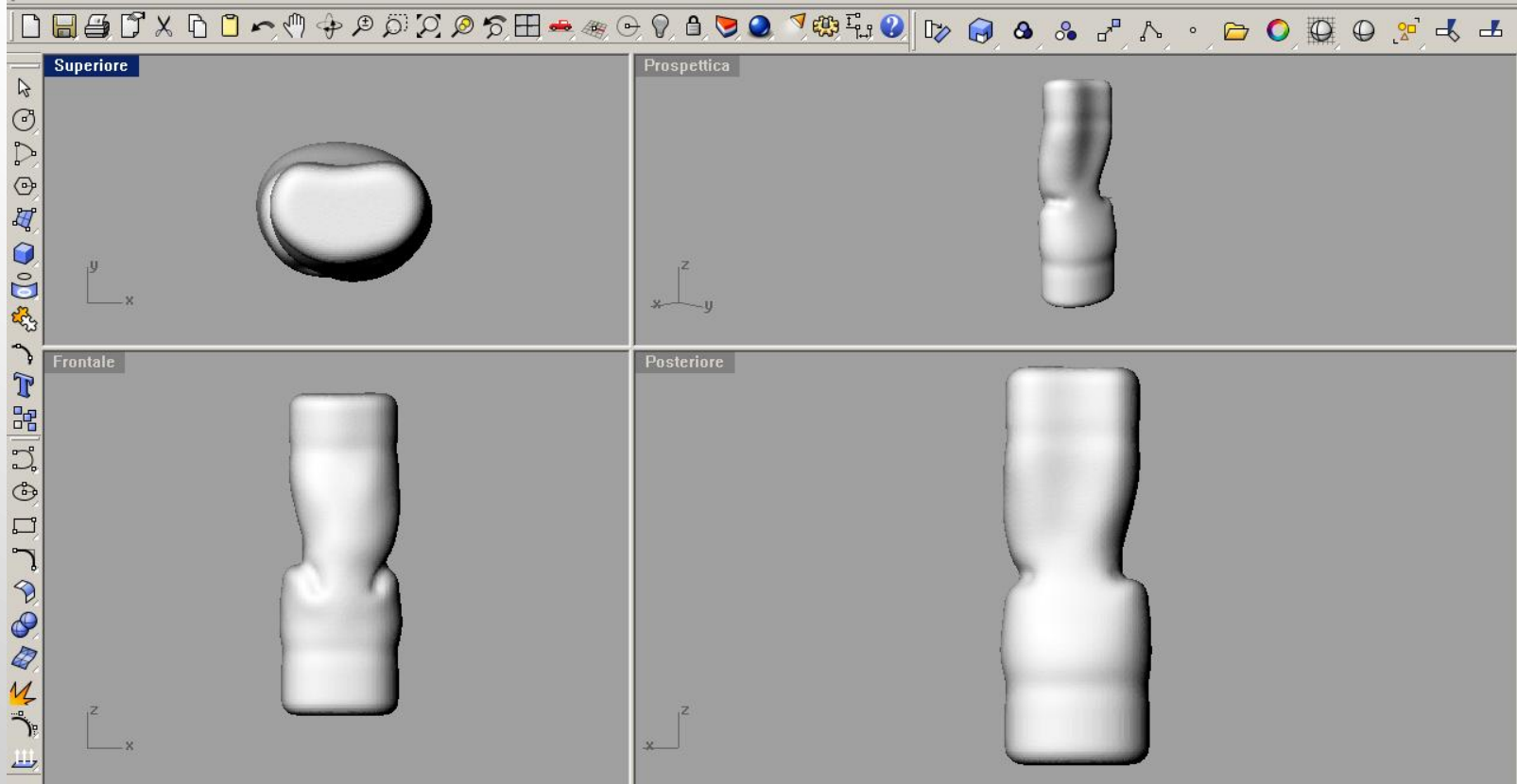
# Creazione della superficie

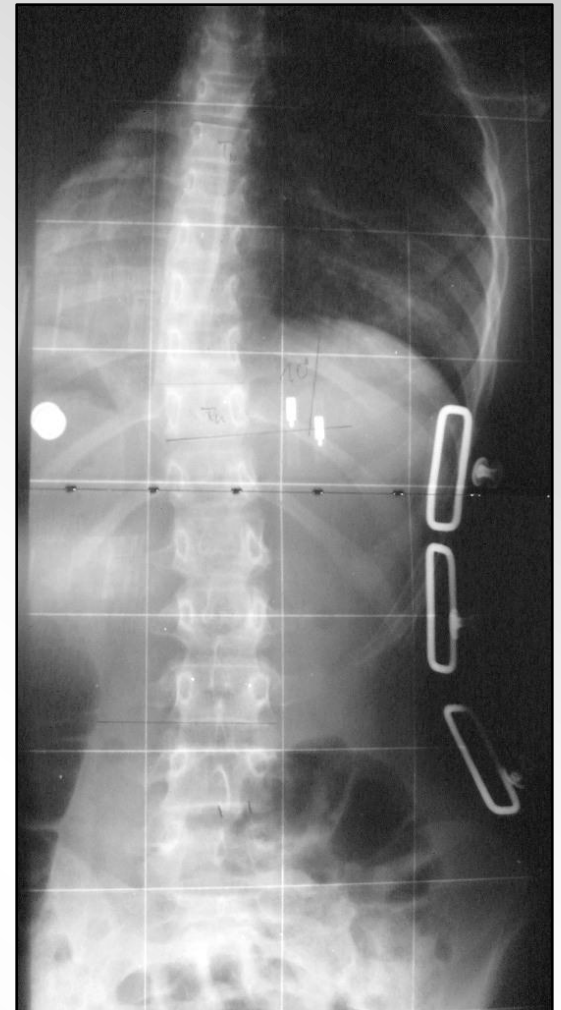


# Correzione del modello al CAD

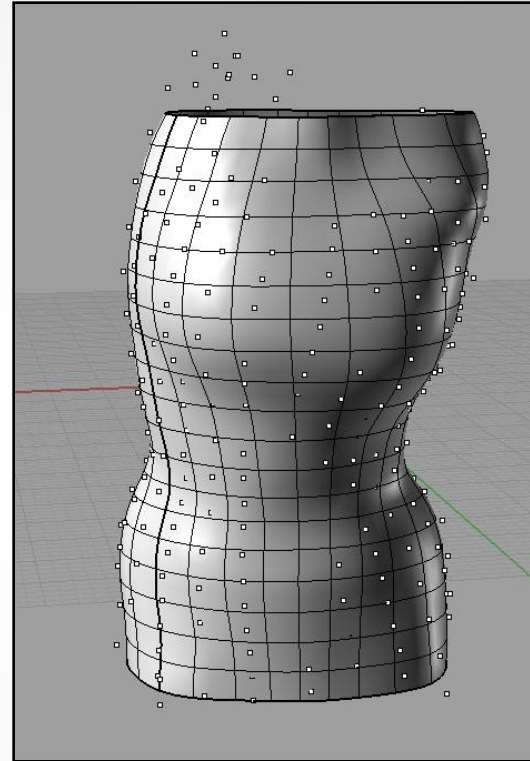
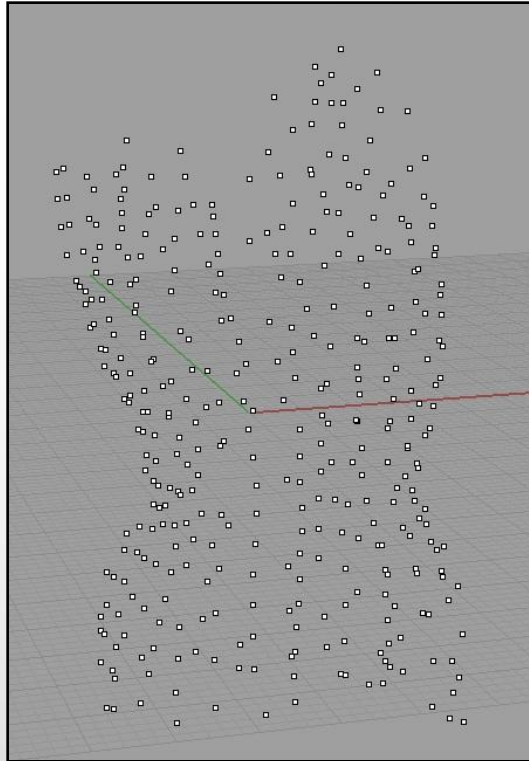


# *Finitura del positivo mediante modellatore solido ed esportazione in formato .stl*

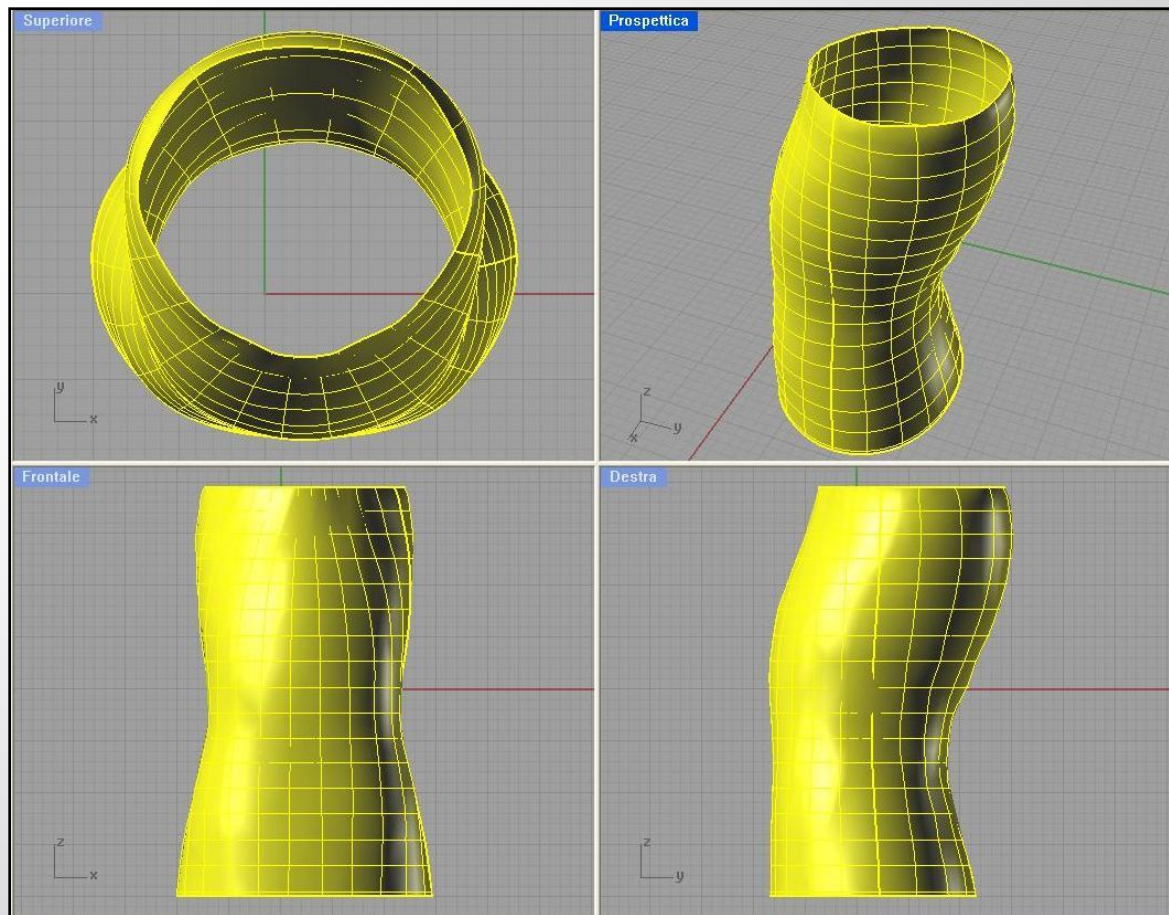




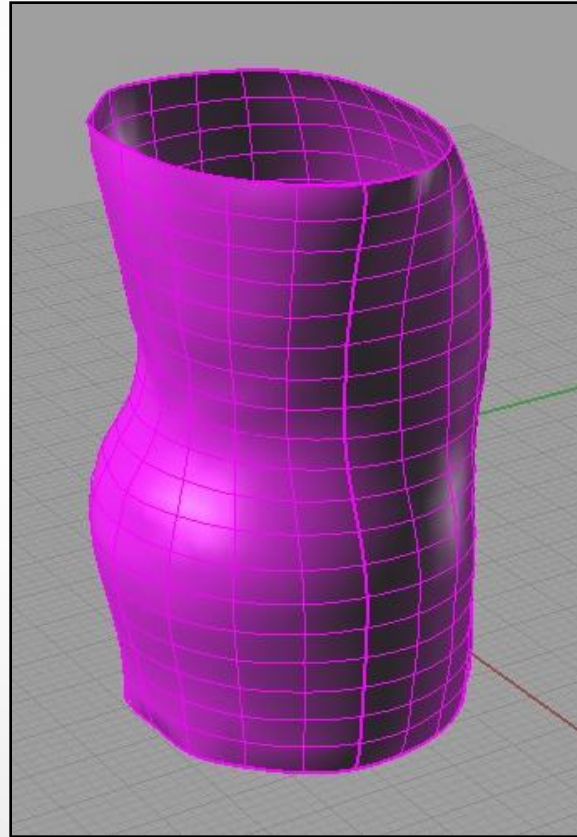




**Impronta effettuata in posizione di ipercorrezione**

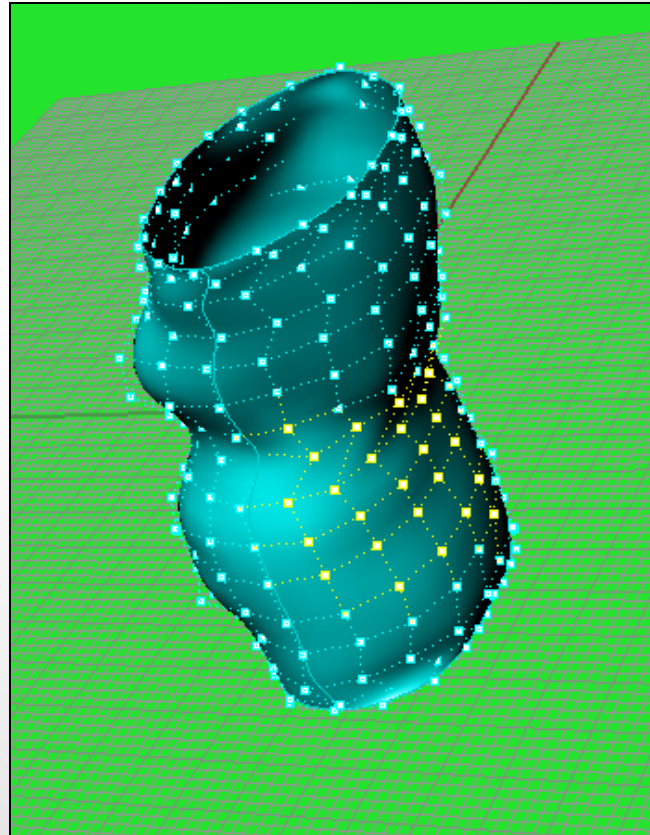


**Impronta effettuata a bimbo con gravi problemi di natura neurologica**

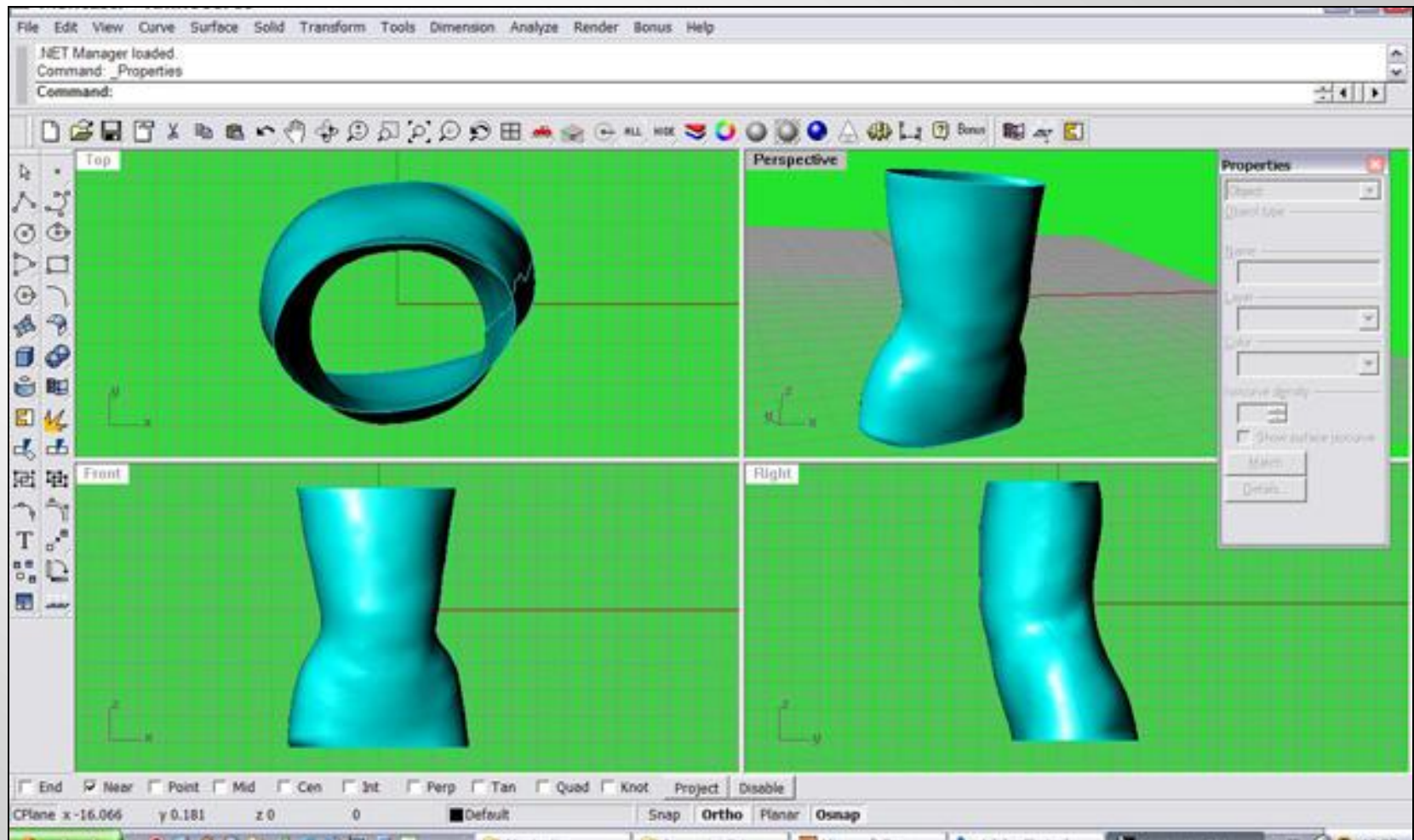


**Paziente adulto in ipercifosi di corporatura molto robusta**

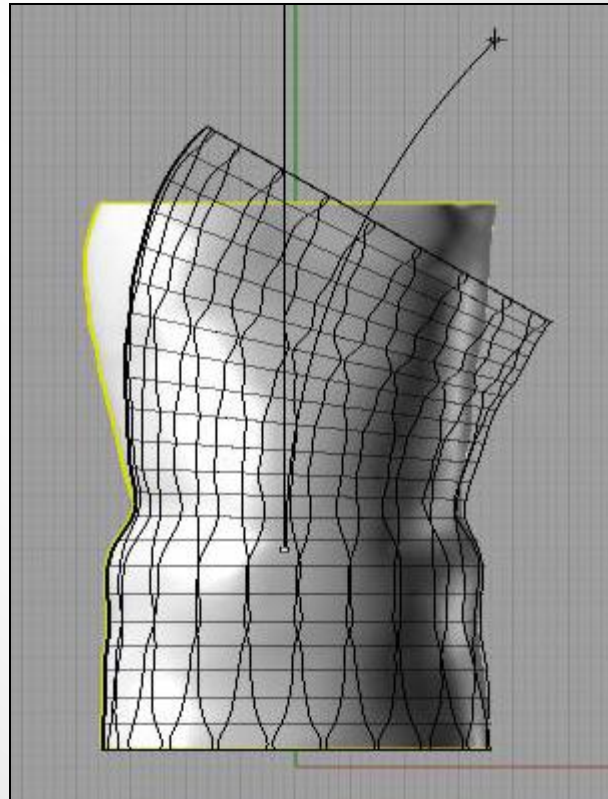
# Modellazione CAD CAM



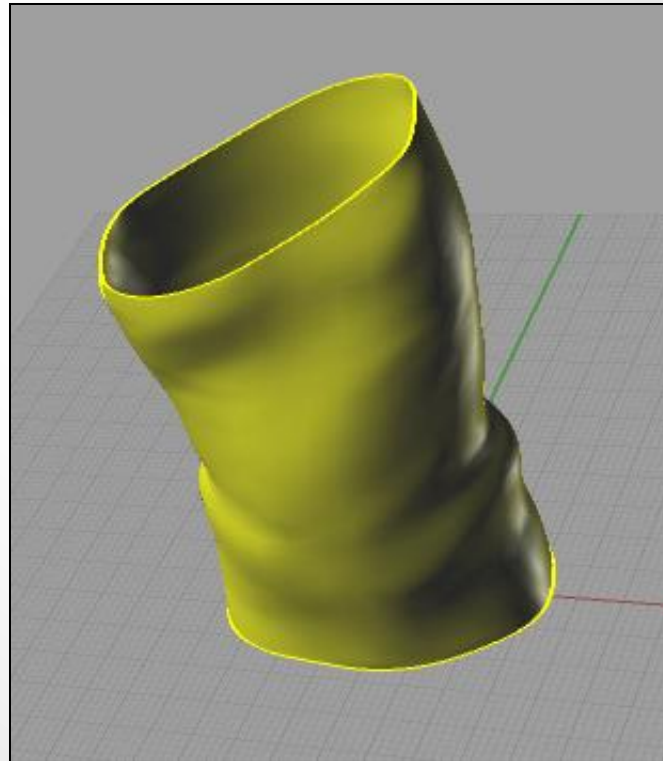
Punti di controllo della superficie



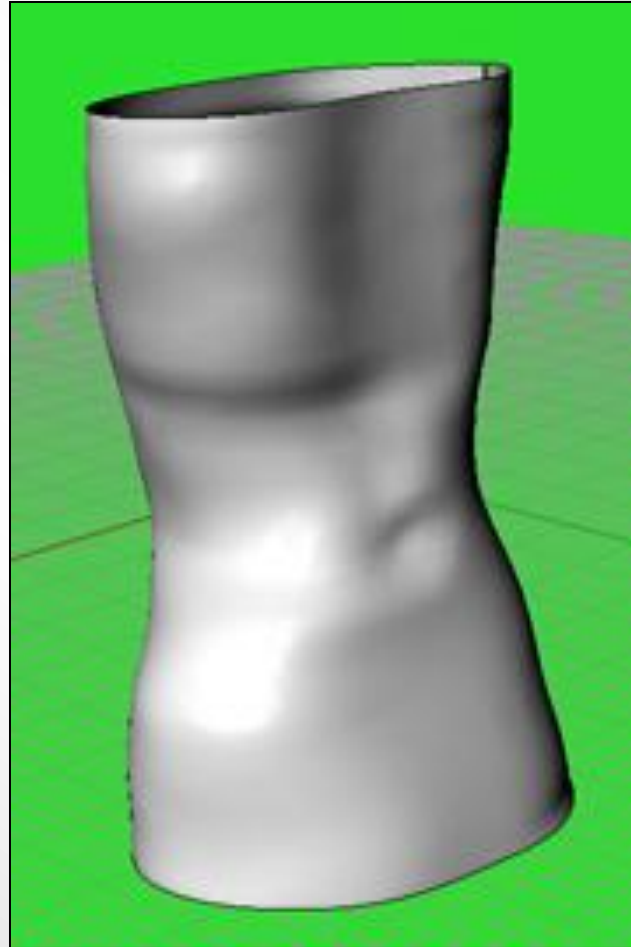
## Visualizzazione



**Bend**

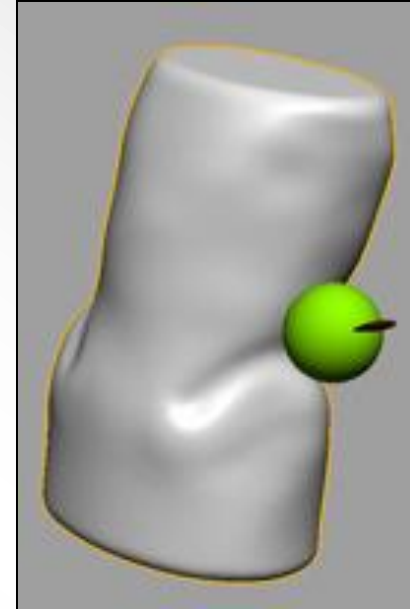


**Torsione**

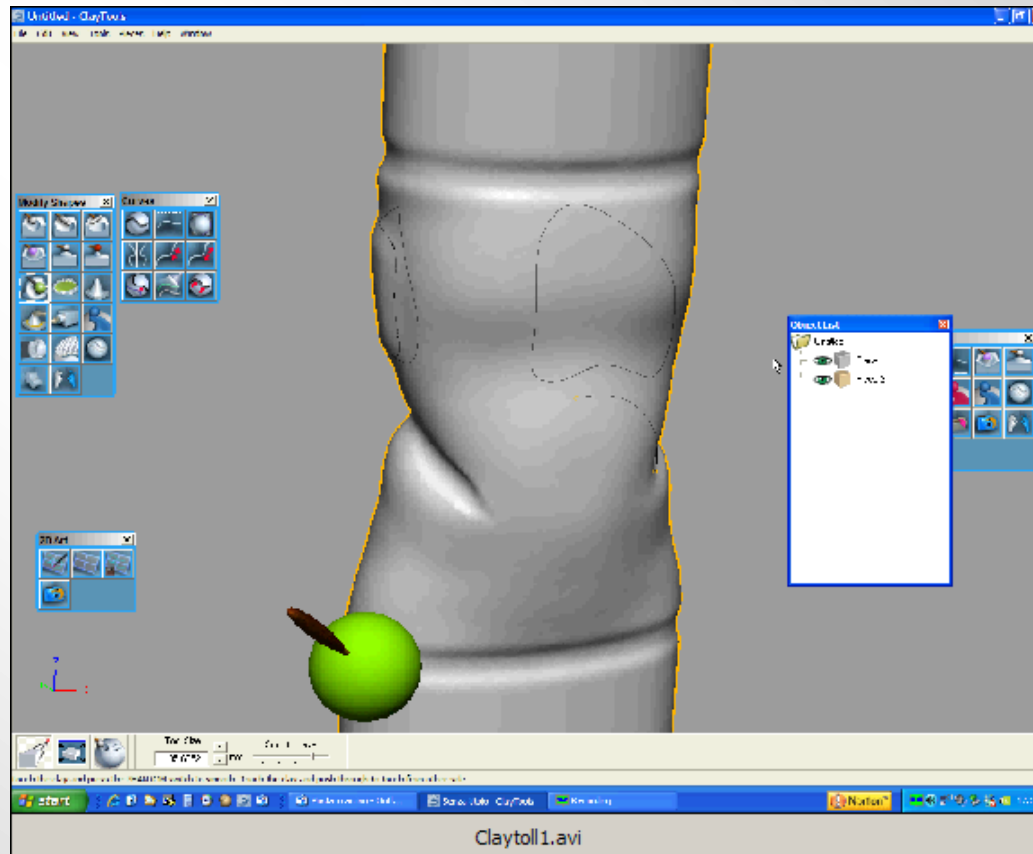


Creazione di spinte

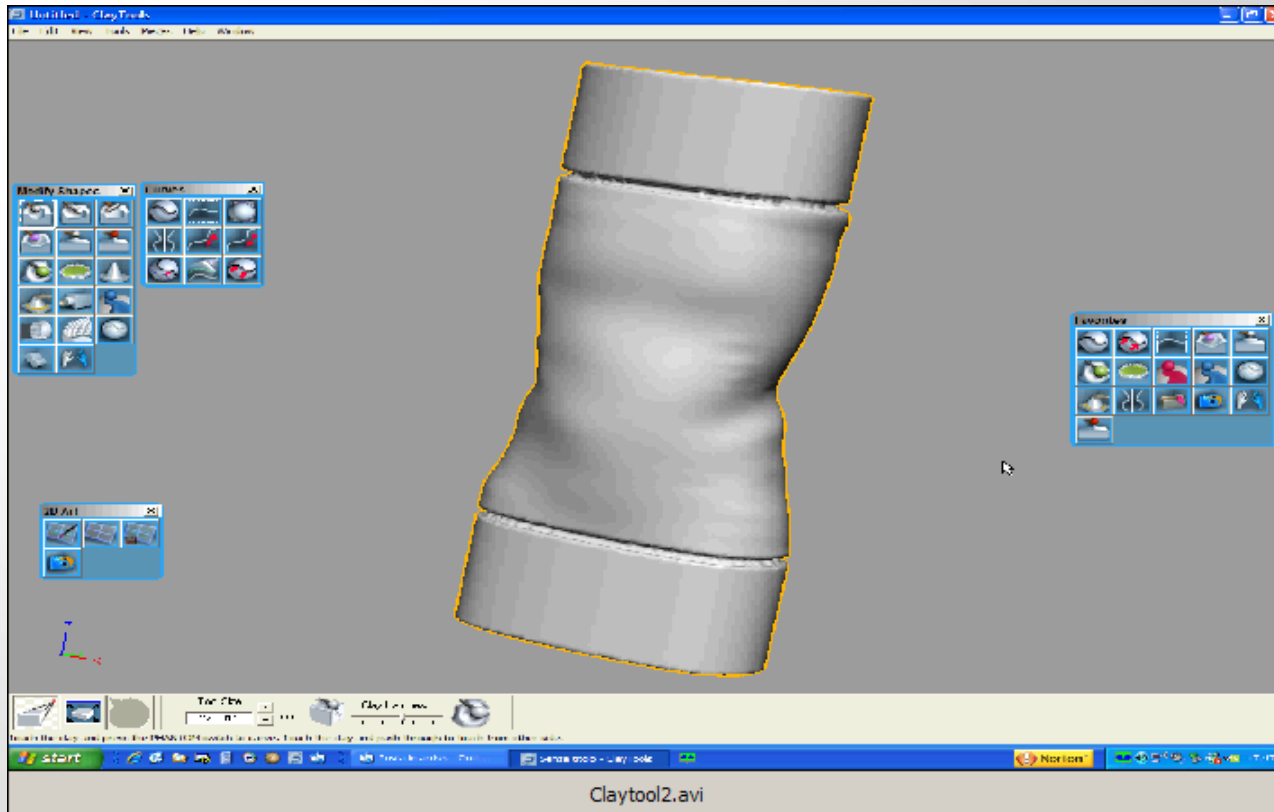




**Modellatore solido**



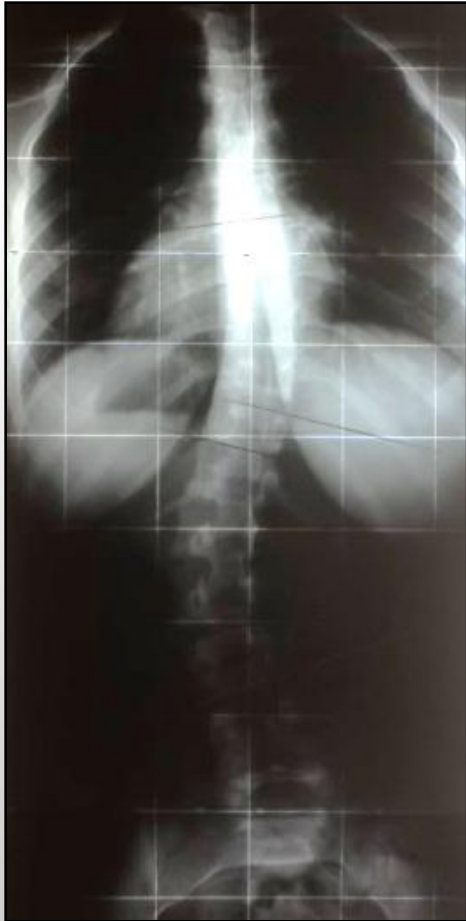
## Modellatore solido



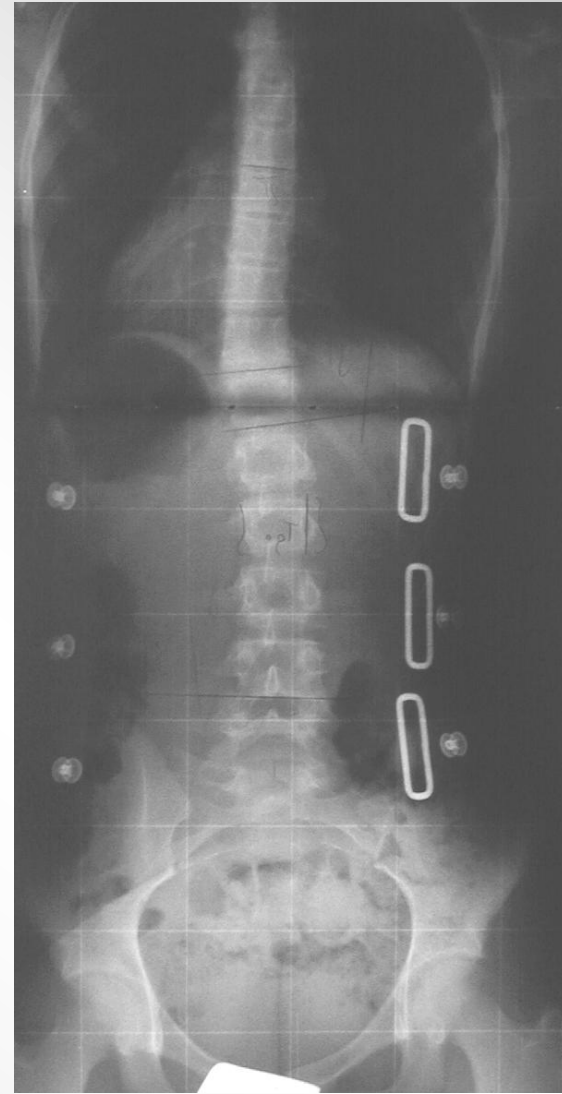
## Modellatore solido



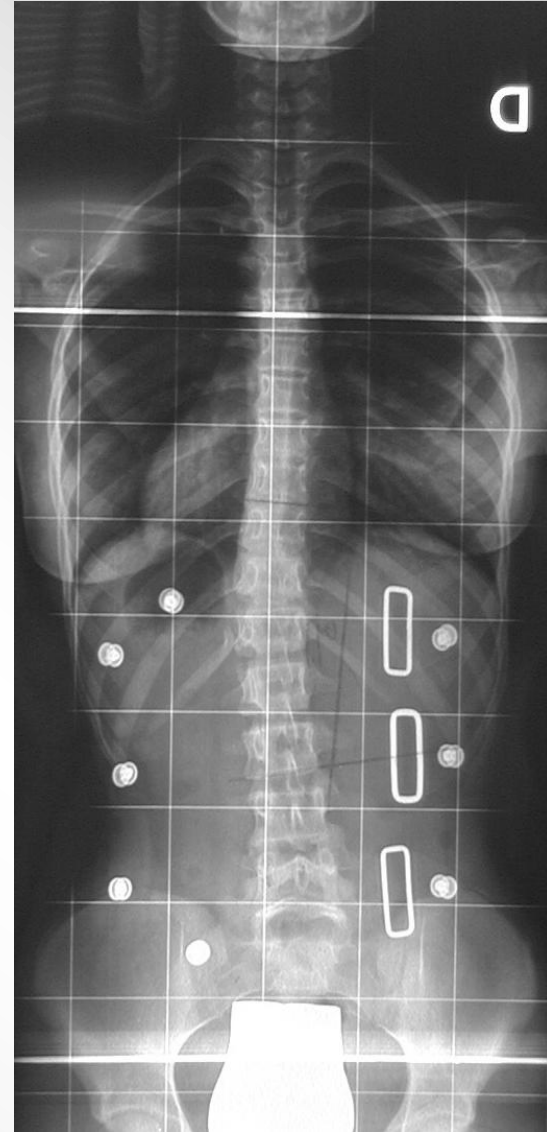


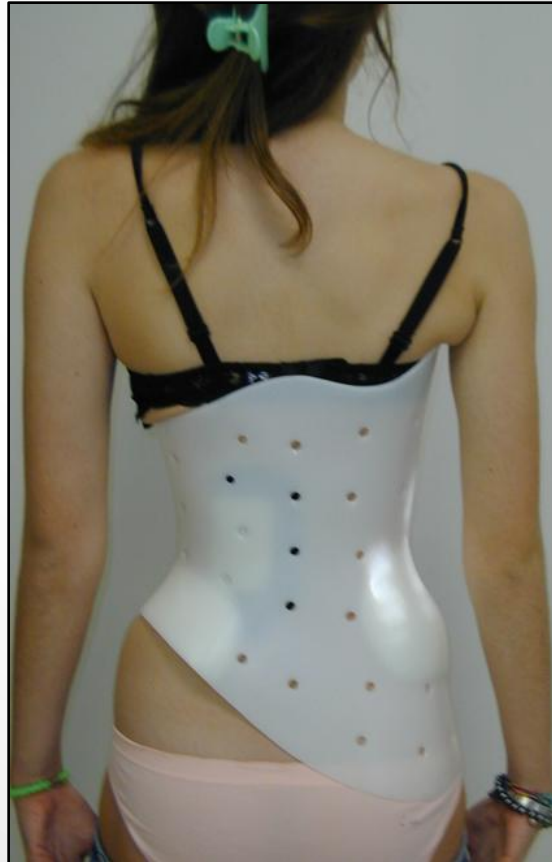




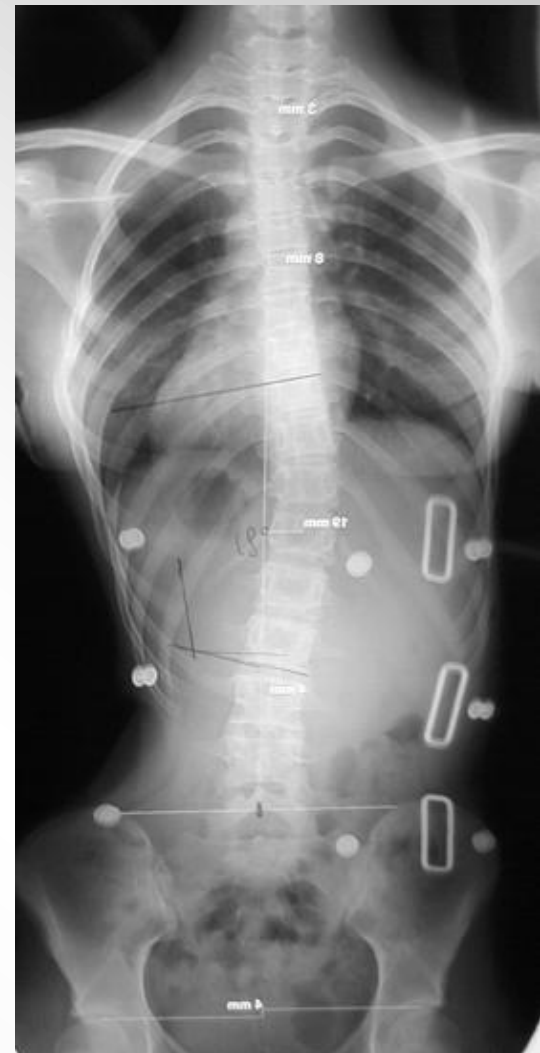
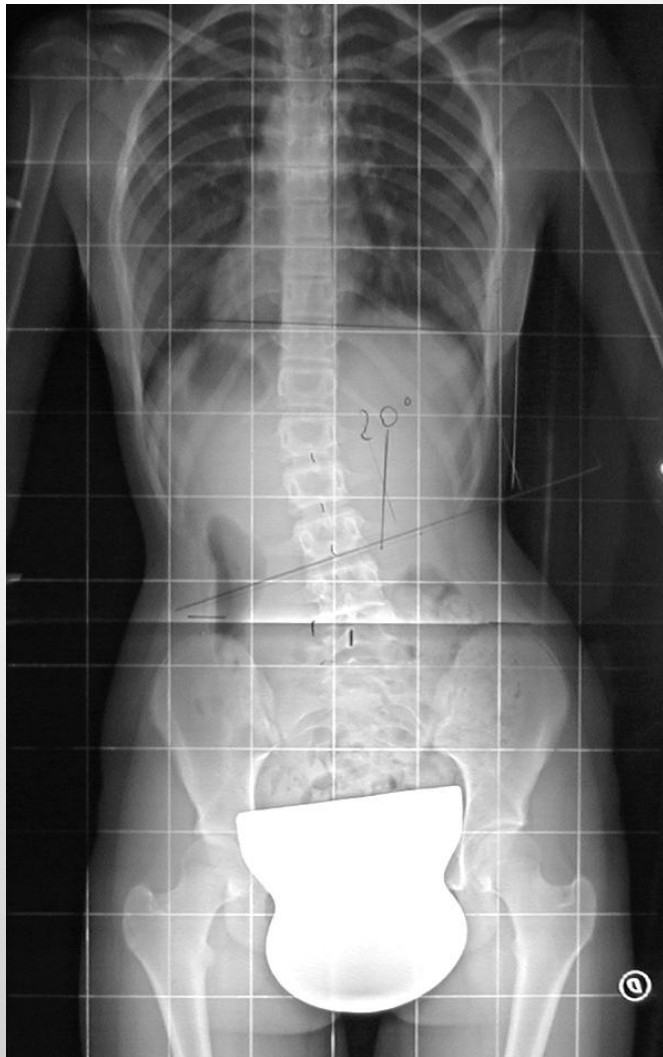




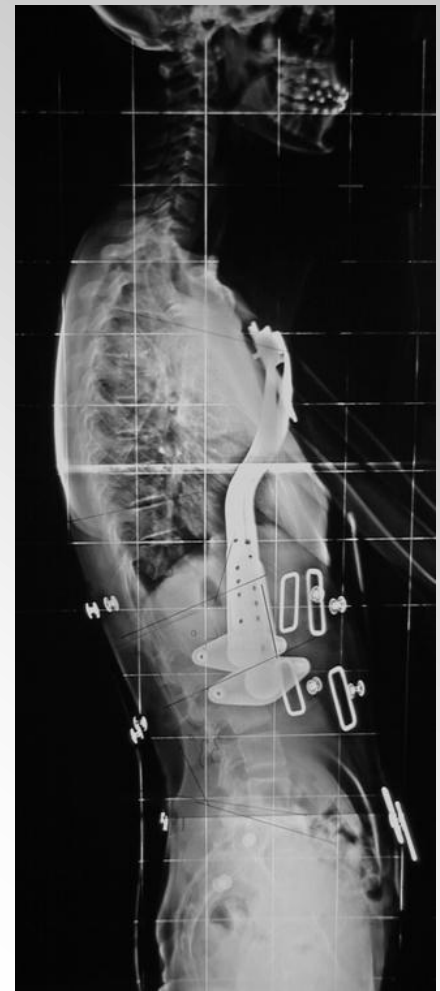
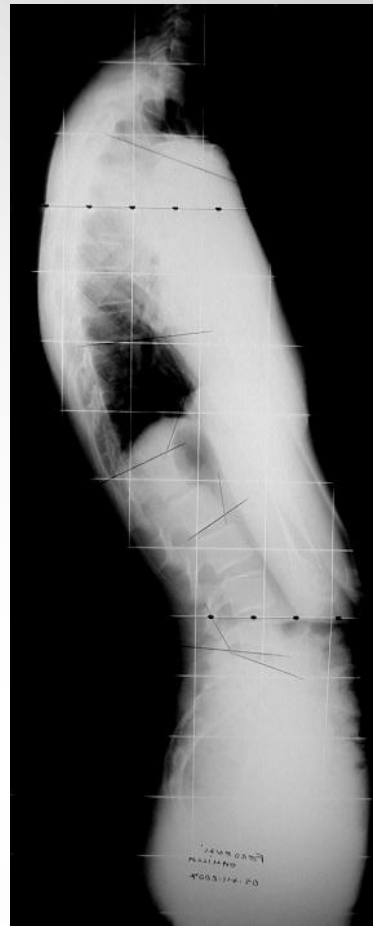
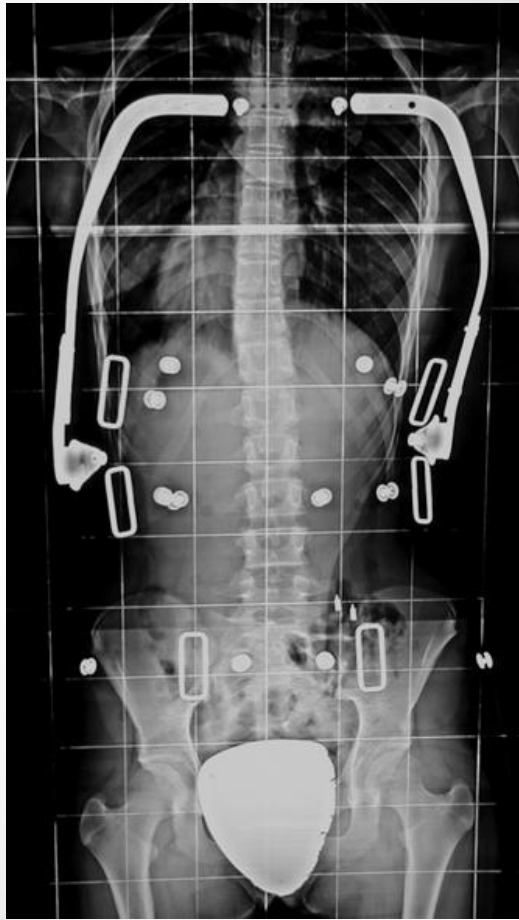


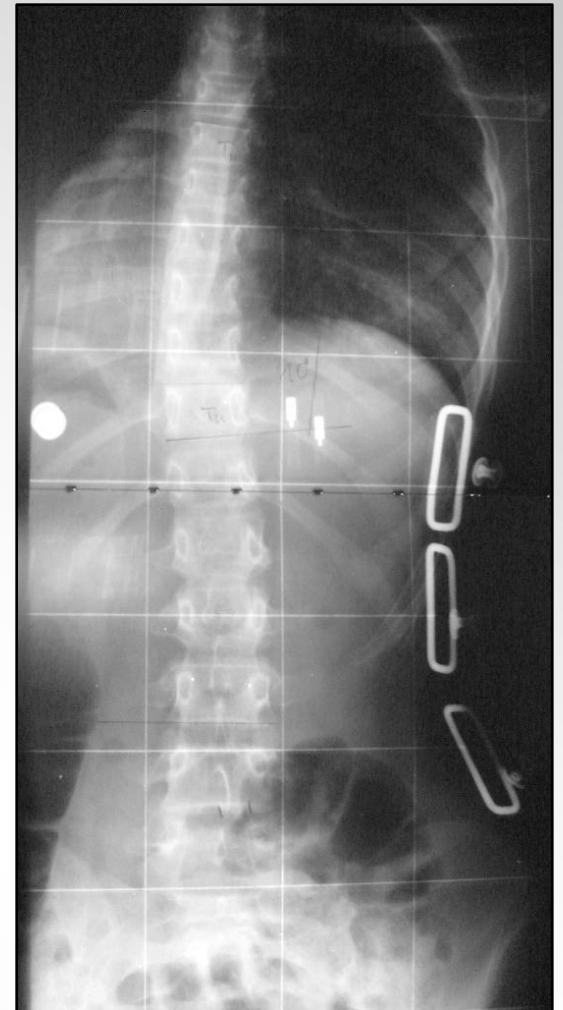




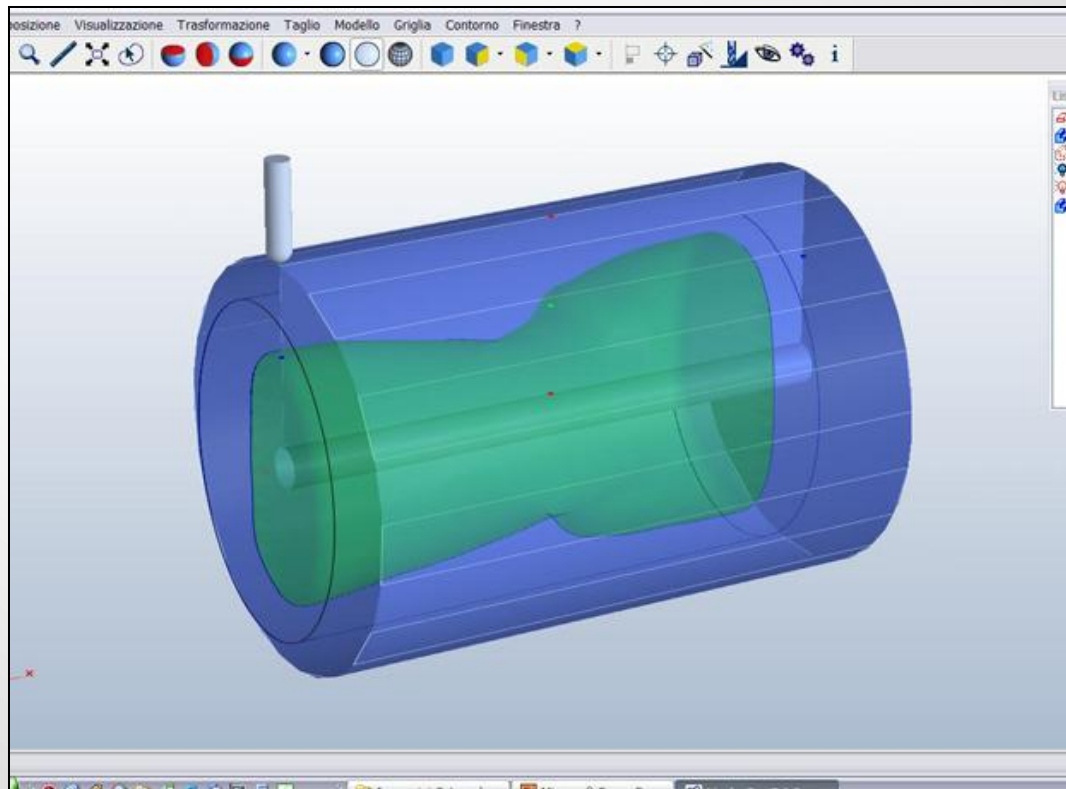








# Fresatura



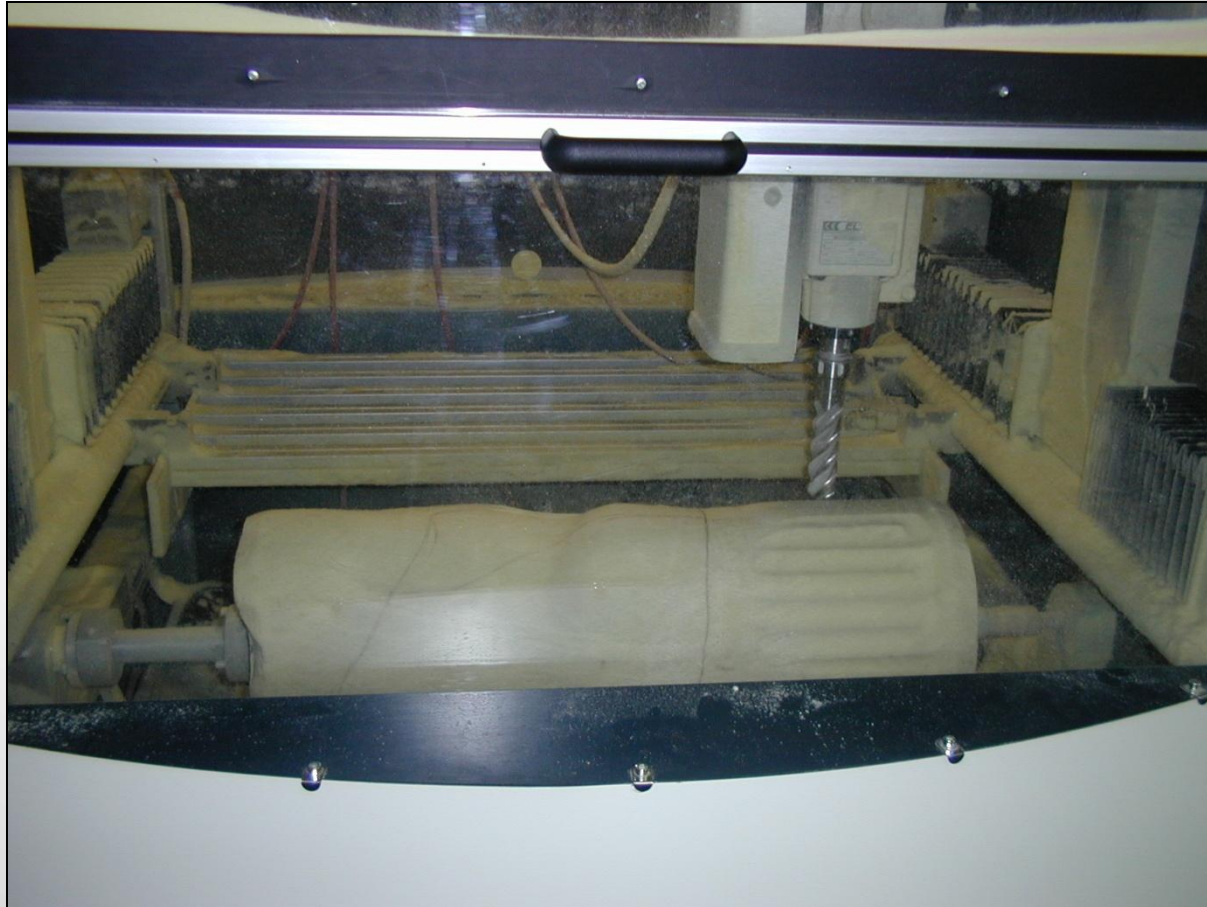
Software di Gestione della fresatrice e di riutilizzo dei positivi





- Sistema di fresatura a 4 assi*
- 3 Assi lineari (x,y,z)*
- 1 Asse rotativo (u)*











# Ortopedia Gualerzi srl

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**e-mail: [info@gualerzi.com](mailto:info@gualerzi.com)**