

Text "hip phantom"

Phantom

//right leg

```
{  
    [ Cylinder_z: x=10  y=0  z=7.5  r=7.5  l=15 ]  
    rho = 1  
}
```

//left leg

```
{  
    [ Cylinder_z: x=-10  y=0  z=7.5  r=7.5  l=15 ]  
    rho = 1  
}
```

//rump

```
{  
    [ Box: x=0  y=0  z=9.5  dx=20  dy=15  dz=12 ]  
    rho = 1  
}
```

//right femur

```
{  
    [ Cylinder_z: x=10  y=0  z=5  r=1.5  l=10 ]  
    rho = 2  
}
```

//left femur

```
{  
    [ Cylinder_z: x=-10  y=0  z=5  r=1.5  l=10 ]  
    rho = 2  
}
```

//right femur-top

```
{
```

```

    [ Sphere: x=10  y=0  z=10  r=2.5 ]
    rho = 2
}
//left femur-top
{
    [ Sphere: x=-10  y=0  z=10  r=2.5 ]
    rho = 2
}

//right pelvis
{
    [ Ellipsoid_free: x=5  y=0  z=10  a_x(1,1,0) a_y(-1,1,0) dx=1 dy=6
dz=5]
    rho = 2
}
//left pelvis
{
    [ Ellipsoid_free: x=-5  y=0  z=10  a_x(1,1,0) a_y(-1,1,0) dx=6 dy=1
dz=5]
    rho = 2
}

//right pelvisbonemarrow
{
    [ Ellipsoid_free: x=5  y=0  z=10  a_x(1,1,0) a_y(-1,1,0) dx=0.5
dy=5.5 dz=4.5]
    rho = 1.1
}
//left pelvis-bonemarrow
{
    [ Ellipsoid_free: x=-5  y=0  z=10  a_x(1,1,0) a_y(-1,1,0) dx=5.5
dy=0.5 dz=4.5]
    rho = 1.1
}

```

```
}

//right femur-head
{
    [ Sphere: x=7.5 y=0 z=12.5 r=2.5 ]
    rho = 2
}

//left femur-head
{
    [ Sphere: x=-7.5 y=0 z=12.5 r=2.5 ]
    rho = 2
}

//right femur-bonemarrow
{
    [ Cylinder_z: x=10 y=0 z=5 r=1 l=10 ]
    rho = 1.1
}

//left femur-bonemarrow
{
    [ Cylinder_z: x=-10 y=0 z=5 r=1 l=10 ]
    rho = 1.1
}

// coccyx
{
    [ Ellipsoid: x=0 y=-5 z=15 dx=2 dy=0.5 dz=4 z<15]
    rho = 2
}
```

```

// bladder
{
    [ Sphere: x=0 y=-1 z=12 r=3 ]
    rho = 1.02
}

// low contrast object in bladder
{
    [ Sphere: x=2.5 y=-1 z=12 r=.5 ]
    rho = 1.03
}

// optional prosthesis: titanium
//right femur
{
    [ Ellipt_Cyl_z: x=10 y=0 z=5 dx=1 dy=.5 l=10 ]
    rho = 4.54
}

// right femur-head
{
    [ Sphere: x=7.5 y=0 z=12.5 r=2.5 ]
    rho = 4.54
}

// connection between right femur and femur-head
{
    [ Ellipt_Cyl: x=8.75 y=0 z=11.25 axis(-1,0,1) a_y(0,1,0) dx=1
dy=0.5 l=4.9]

    rho = 4.54
}

```