Plan ahead with Pterional PLUS

Cranial iD™
Individually designed. Personalized care.
Pterional PLUS

A dual-purpose, patient specific implant for prevention and correction of PTH, addressing hard and soft tissue deficiencies.

Pre-op

Post-op

Historically, 10% of CAD/CAM implant surgeries resulted in revisions due to temporalis muscle displacement and/or temporal fat pad atrophy.¹

$39,641¹

the average cost of revisions related to PTH
Cranial iD

Our customized cranial implant portfolio, Cranial iD, allows you to address your patient’s desire for complete restoration and aesthetic results. Your input on material selection partnered with our Design Engineer drives the artistry of the implant. All information gathered from this session aids in delivering an exceptional anatomical fit, contour and positive post-operative patient experience.

Standard implant

PEEK Pterional PLUS implant
A personalized approach to correcting and preventing persistent temporal hollowing.

Traditional methods for cranial reconstruction do not account for post-surgical hard and soft tissue atrophy that occurs over time, leading to persistent temporal hollowing (PTH). PTH causes drastically altered appearances and could possibly cause patients to seek revision surgery for an improved quality of life.

Pterional PLUS uses the design process and materials already proven for customized cranial implants that are designed to enhance the post-operative results over time. Repeat procedures using our Pterional PLUS implant experienced no PTH. Therefore, patients who receive a PLUS implant may not require a revision surgery to correct PTH; surgeons may be more efficient, and healthcare could be more cost-effective.

### PEEK PLUS

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
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<tbody>
<tr>
<td>78-70010</td>
<td>Customized cranial implant - small</td>
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<tr>
<td>78-70020</td>
<td>Customized cranial implant - medium</td>
</tr>
<tr>
<td>78-70030</td>
<td>Customized cranial implant - large</td>
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<td>78-70040</td>
<td>Customized cranial implant - XL</td>
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### MEDPOR PLUS

<table>
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<tr>
<td>5444-1-110</td>
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<tr>
<td>5444-1-210</td>
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<td>5444-1-310</td>
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<tr>
<td>5444-1-410</td>
<td>Customized cranial implant - XL</td>
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</tbody>
</table>
On average, Pterional PLUS added $1.5\text{cm}^3$ of additional implant volume. The difference between the contralateral native cranium thickness and implant thickness ranges from 0.39 to 1.06cm.

The implant design is adjusted to provide the additional volume needed to prevent PTH. On average, this means 8-10 millimeters of augmentation.$^2$

Together, you and our Designer look at the contralateral side of the soft tissue window and decide on an appropriate amount of augmentation to provide cranial symmetry.
Cranial iD customized implants

CT scan protocol

Phone: 855 479 5224
Email: CMFcustomizedimplants@stryker.com

Patient positioning

Head alignment
Remain straight in neutral position.

Gantry tilt
0° gantry tilt.

Scan length/Field of view (FOV)

Scan length
For cranial defects, encompass the entire skull, including at least 2 slices superior to the skull.

FOV
For mandibular defects, encompass the entire mandible. Select FOV to include all surrounding anatomy.

Scanning process

Patient movement
Avoid patient motion. If the scan shows motion artifacts, the scan cannot be used.

Acquisition

Slice thickness
Maximum = 1.5 mm (1 mm preferred)

Beam collimation
Width and detector configuration necessary to achieve actual slice thickness.

Table increment
Constant table increment, no gaps. Smaller than or equal to slice thickness.

Sequential scanners
No overlap and no gap.

Single-slice helical scanners
Beam pitch = 1

Multi-slice helical scanners
Beam pitch < 1 (GE: High Quality; Toshiba: Detail)

Slice orientation
Axial slice orientation.

Algorithm (Kernel)
Bone algorithm.

Warning: DO NOT post process to alter slice orientation or thickness.

Data

Series ID
All images of a scan should be stored in one series.

File format
DICOM format.

No cone beam scans.

Contrast not required.

No raw data
Do not compress.

Inclusion of CT Viewer not recommended.

No raw data
Archive only the relevant examination in uncompressed DICOM (CD-R preferred).

Data storage
Recommendation: Save raw data for at least 14 days after scan.

References


2. Stryker partnered with Dr. Chad Gordon of Johns Hopkins University on this project.

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Stryker Craniomaxillofacial
Kalamazoo, MI 49002 USA
t: 269 389 5346, f: 877 648 7114
toll free: 800 962 6558
stryker.com
stryker.com/cmf