

Fiducial Markers

Guide & Procedure Based Recommendations

Experience The CIVCO Difference

The Gold Standard in Fiducial Markers

Implantable fiducial markers provide a highly effective method of ensuring accurate target localization for tumors/organs which move in respect to external anatomy, as well as for the precision localization needed for stereotactic radiotherapy. CIVCO stays on the leading edge of marker research and development and provides an extensive line of fiducials for a wide variety of clinical applications.



Specially knurled surface inhibits migration

Gold Fiducial Features:

- Specially knurled surface is designed to inhibit migration
- 99.9% gold
- Non-biological imaging characteristics make markers easier to identify



Non-artifacting polymer marker

Largest selection of specially designed fiducials includes:

- Biocompatible non-artifacting polymer marker
- Fiducials designed for MR imaging and fusion
- SBRT fiducial kit
- Fiducials linked at a specified distance for calculating precise localization
- Coil markers with solid definable end points



Linked Markers

Unprecedented Customer Support

- Dedicated customer support staff providing personalized service, we are here to help you
- Reimbursement support and guidance, helping you get paid



Coil Markers

Procedure Based Recommendations



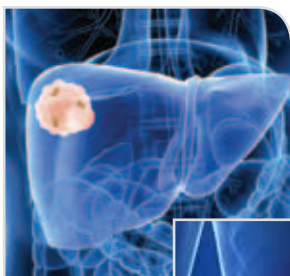
PointCoil Marker and Trocar Needle

Lung

Implanted gold markers help guide SBRT treatment of the lung. There are several techniques by which these markers are placed at or near the treatment site. CIVCO offers specialized fiducial kits to help target these regions.

The New *PointCoil™* SBRT Kit includes 4 PointCoil markers and a special Trocar Needle designed specifically for SBRT marker placement.

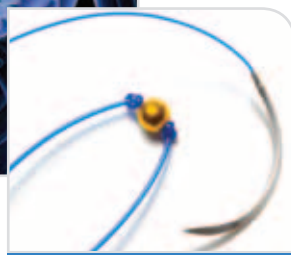
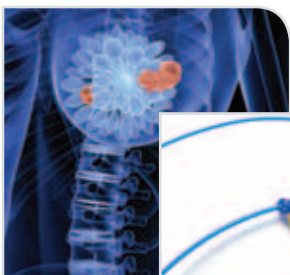
Description	Qty	Part Number
Sterile Placement Needle (18GA ETW x 20cm) with (1 x 3mm) PolyMark™ Marker	1	MTCTXPM101820
Loose Sterile PointCoil Marker (0.8 x 5mm)	1	MTCTXPC08
Sterile Placement Needle (18GA ETW x 20cm) with (0.9 x 5mm) PointCoil Marker	1	MTCTXPC091820
PointCoil SBRT Kit includes: 1 - (19GA ETW x 15cm) Trocar Needle and 4 - (0.8 x 5mm) PointCoil Markers	1	MTCTXPC0819154



Liver and Pancreas

Implanted gold markers help guide SBRT treatment of the liver and pancreas. There are several techniques by which these markers are placed at or near the treatment site. CIVCO offers specialized fiducial kits to help target these regions.

Description	Qty	Part Number
Loose Sterile Soft Tissue Gold Markers (0.8 x 3mm)	3	MTNW887808
Sterile Placement Needle (18GA ETW x 12cm) with (0.9 x 3mm) Gold Marker	1	MTNW887871
Sterile Placement Needle (18GA ETW x 12cm) with (0.9 x 3mm) Gold Marker	3	MTNW887870
Sterile Placement Needle (18GA ETW x 20cm) with (1 x 3mm) PolyMark Marker	1	MTCTXPM101820
Loose Sterile PointCoil Marker (0.8 x 5mm)	1	MTCTXPC08
Sterile Placement Needle (18GA ETW x 20cm) with (0.9 x 5mm) PointCoil Marker	1	MTCTXPC091820
PointCoil SBRT Kit includes: 1 - (18GA ETW x 15cm) Trocar Needle and 4 - (0.8 x 5mm) PointCoil Markers	1	MTCTXPC0819154



Suture-Type Marker on absorbable suture

Breast

Suture-Type Markers are designed for high accuracy breast tumor localization. The pure gold spheres with small central holes are readily sutured in place to provide a permanent localization solution. They are available ready for placement - prethreaded on absorbable sutures.

Description	Qty	Part Number
Sterile Absorbable Suture with Suture-Type Marker (2mm diameter)	3	MTNW887866
Sterile Placement Needle (18GA ETW x 20cm) with (1 x 3mm) PolyMark Marker	1	MTCTXPM101820

Procedure Based Recommendations



SureLock Markers

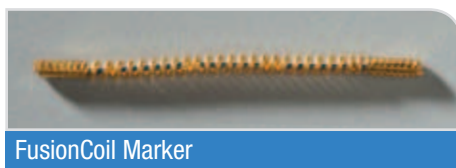
Prostate

In order to minimize complications many prostates are now being treated with IMRT and IGRT. To ensure you are hitting your target, you need to accurately visualize your target. By using our gold markers you can clearly see the prostate whether you are using portal imaging, kV image pairs or CBCT. Since the prostate can move within the pelvis, relying on bony anatomy can be risky. Implanting CIVCO markers minimizes this risk enabling you to perform advanced treatments with confidence.

New **SureLock™ Markers** have a unique circular projection and design to ensure accurate daily localization and inhibit migration.

Refer to pages 5-7 for CIVCO's advanced and standard fiducials for prostate.

Description	Qty	Part Number
Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 3mm) Gold Marker	3	MTNW887825
Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 3mm) Gold Marker	4	MTNW887840
Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 3mm) SureLock Gold Marker	1	MTCTXSL1217201
Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 3mm) SureLock Gold Markers	3	MTCTXSL1217203
Sterile Placement Needle (18GA ETW x 20cm) with (0.9 x 3mm) Gold Marker	3	MTNW887873
Sterile Placement Needle (17GA ETW x 30cm) with (1.2 x 3mm) Gold Marker	3	MTNW887835



FusionCoil Marker

MRI/CT Fusion - Available Only from CIVCO!

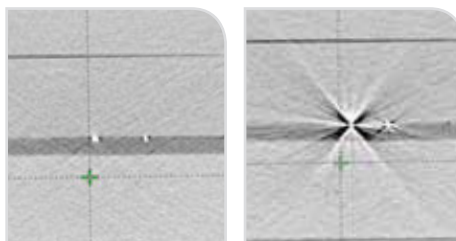
The **FusionCoil™ Marker** images equally as well in CT as it does in MR. It consists of an open spiral gold coil with a biocompatible segmented flexible metallic core that appears as a clear black dot in MR. This is the first of its kind providing superior reference for image fusion as well as precise IGRT.



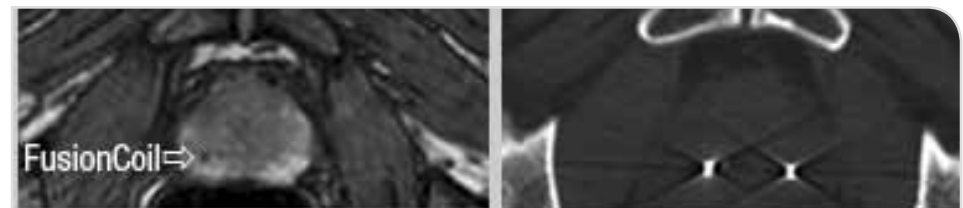
Non-artifacting polymer markers

The **PolyMark™ Marker** is the first biocompatible polymer-based marker. The PolyMark is visualized in MR, creates virtually no artifact in CT and is clearly visible in kV based IGRT solutions.

Description	Qty	Part Number
Sterile Placement Needle (18GA ETW x 20cm) with (1 x 20mm) FusionCoil Marker	1	MTCTXFC10201820
Sterile Placement Needle (18GA ETW x 20cm) with (1 x 3mm) PolyMark Marker	1	MTCTXPM101820



CT Image: PolyMark (left) vs. Gold Markers (right)



This patient has a typical gold coil on their left. It is clearly visible in CT but not at all in MR. The Fusion Coil Marker is on the patient's right. It is clearly visible in both CT and MR.

Advanced Fiducials

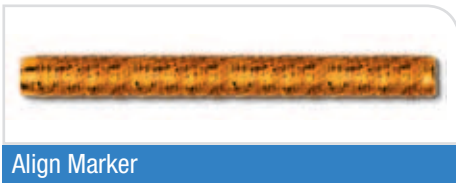
Linear Fiducials



FlexiCoil Marker

The *FlexiCoil™ Marker* is a unique, non-migrating marker with solid end points. FlexiCoil provides a unique image with 2 nodes that clearly define the end points.

Description	Qty	Part Number
Sterile Placement Needle (18GA ETW x 20cm) with (0.9 x 10mm) FlexiCoil Marker	1	MTCTXFC09101820
Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 20mm) FlexiCoil Marker	1	MTCTXFC12201720



Align Marker

Align™ Markers are 10mm long to accommodate localization software systems that utilize linear fiducials as opposed to multiple segment points.

Description	Qty	Part Number
Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 10mm) Align Marker	2	MTNW887881
Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 10mm) Align Marker	3	MTNW887882
Sterile Placement Needle (18GA ETW x 20cm) with (0.8 x 10mm) Align Marker	2	MTNW887883

Fiducials for use with CyberKnife

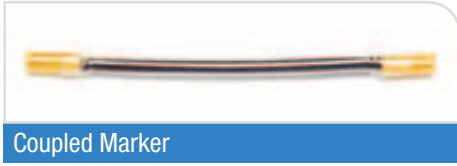


CyberMark Marker

CyberMark™ Markers were developed specifically for use with Accuray's CyberKnife robotic radiosurgery system. The gold marker measures 5mm long and 1mm in diameter, as specified in the CyberKnife software.

Description	Qty	Part Number
Sterile Loose (1 x 5mm) CyberMark Marker	1	MTNW887854
Sterile Loose (1 x 5mm) CyberMark Marker	3	MTNW887852
Sterile Loose (1 x 5mm) CyberMark Marker	4	MTNW887855
Sterile Placement Needle (18GA ETW x 20cm) with (1 x 5cm) CyberMark Marker	1	MTNW887851
Sterile Placement Needle (18GA ETW x 20cm) with (1 x 5cm) CyberMark Marker	3	MTNW887853

Advanced Fiducials



Coupled Marker

Multiple Fiducial Solutions

Coupled™ Markers are 3mm long with either 0.8 or 1.0mm diameters attached at a fixed distance - 20mm apart from center to center. They are secured with a sterile, tissue-absorbable material. This ensures that the markers are implanted at a known distance for calculating precise localization.

Description	Qty	Part Number
Sterile Placement Needle (18GA ETW x 20cm) with (0.8 x 3mm) Coupled Marker	2	MTNW887709
Sterile Placement Needle (17GA ETW x 20cm) with (1 x 3mm) Coupled Marker	1	MTNW887710
Sterile Placement Needle (17GA ETW x 20cm) with (1 x 3mm) Coupled Marker	2	MTNW887712
Sterile Placement Needle (17GA ETW x 20cm) with (1 x 3mm) Coupled Marker & Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 3mm) Gold Marker	1 of each	MTNW887711



FlexiMarc G/T Markers

The **FlexiMarc™ G/T Marker** provides distinctive non-biological projection with easily definable nodes. The gold nodes are connected with a fine titanium line which creates the optimal in performance characteristics and visualization. Markers feature a pointed lead, reducing the pressure required for solid tumor insertion by 60%.

Description	Qty	Part Number
Sterile Placement Needle (18GA ETW x 20cm) with (1 x 3mm) - 10mm Spaced FlexiMarc G/T Marker	1	MTCTXGT10182010
Sterile Placement Needle (18GA ETW x 20cm) with (1 x 3mm) - 20mm Spaced FlexiMarc G/T Marker	1	MTCTXGT10182020
Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 3mm) - 10mm Spaced FlexiMarc G/T Marker	1	MTCTXGT12172010
Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 3mm) - 20mm Spaced FlexiMarc G/T Marker	1	MTCTXGT12172020



Prespaced Markers

Prespaced Markers provide a solution for implanting markers spaced 10 or 15mm apart. Prespaced Markers are not connected to each other.

Description	Qty	Part Number
Sterile Placement Needle (17GA ETW x 20cm) with 15mm spacer and 2 - (1.2 x 3mm) Gold Markers	1	MTNW887815
Sterile Placement Needle (17GA ETW x 20cm) with 10mm spacer and 2 - (1.2 x 3mm) Gold Markers	1	MTNW887810



Merrifield Cartridge

The **Merrifield Cartridge™** allows you to deploy two or more markers through the same needle with only one needle stick. After deploying the first marker, the stylet is simply removed and the Merrifield Cartridge is easily attached to the end of the needle. The tip of the needle is then repositioned and the next marker is deployed.

Description	Qty	Part Number
Merrifield Cartridge Kit, Sterile Pre-loaded (1.0 x 5mm) Soft Tissue Gold Marker with (24.5cm) stylet for use with (18GA ETW x 20cm) Placement Needle	1	MTNW887621

Standard Fiducials

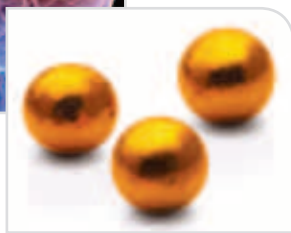
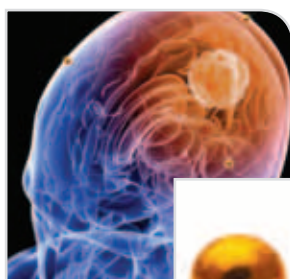
Gold Soft Tissue Markers



Gold Soft Tissue Markers

Gold Soft Tissue Markers are pure gold cylinders specially knurled to inhibit migration. They are 3mm long and 0.8, 0.9, 1.2 or 1.6mm in diameter. They are available loose or in sterilized preloaded needles.

Description	Qty	Part Number
Sterile Loose Soft Tissue Gold Markers (0.8 x 3mm)	3	MTNW887808
Sterile Loose Soft Tissue Gold Markers (0.9 x 3mm)	3	MTNW887809
Sterile Loose Soft Tissue Gold Markers (1.2 x 3mm)	3	MTNW887812
Sterile Loose Soft Tissue Gold Markers (1.2 x 3mm)	4	MTNW887814
Sterile Placement Needle (18GA ETW x 20cm) with (0.9 x 3mm) Gold Marker	1	MTNW887872
Sterile Placement Needle (18GA ETW x 20cm) with (0.9 x 3mm) Gold Marker	3	MTNW887873
Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 3mm) Gold Marker	1	MTNW887830
Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 3mm) Gold Marker	3	MTNW887825
Sterile Placement Needle (17GA ETW x 20cm) with (1.2 x 3mm) Gold Marker	4	MTNW887840
Sterile Placement Needle (17GA ETW x 30cm) with (1.2 x 3mm) Gold Marker	1	MTNW887836
Sterile Placement Needle (17GA ETW x 30cm) with (1.2 x 3mm) Gold Marker	3	MTNW887835
Sterile Placement Needle (17GA ETW x 30cm) with (1.2 x 3mm) Gold Marker	4	MTNW887837
Sterile Placement Needle (14GA ETW x 20cm) with (1.6 x 3mm) Gold Marker	3	MTNW887860
Sterile Placement Needle (17GA ETW x 20cm) no markers	1	MTNW887351



Bone Markers

Cranial & Spinal

Bone Markers are pure gold 2mm spheres recommended for cranial and spinal applications. They are typically placed in a small hole in the bone and sealed with bone wax, with no marker migration.

Description	Qty	Part Number
Loose Sterile Bone Markers (2mm diameter)	3	MTNW887805

