



**A great fiducial marker**  
**Ideal for Intrafraction Motion Management**

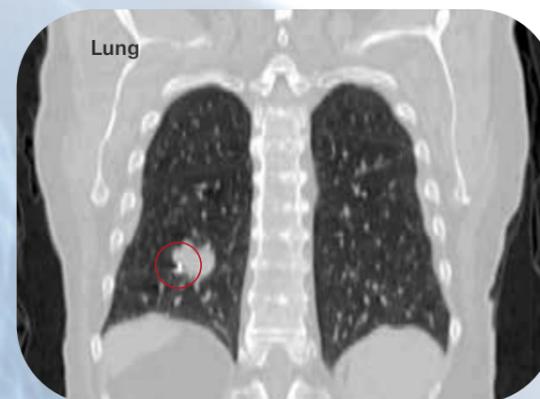
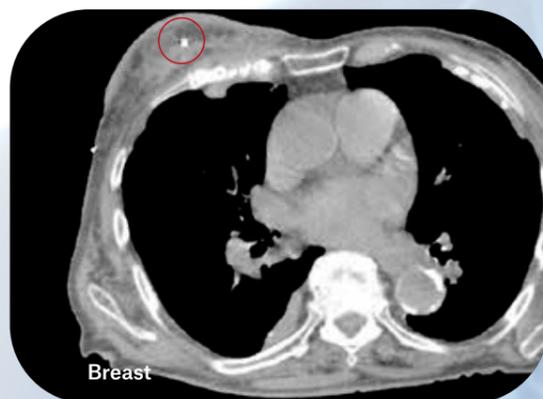


## Breast

Gold Anchor can be implanted during surgery to mark the surgical cavity after lumpectomy. The marker can then be used to improve accuracy in delineation of the surgical cavity during IGRT. Marker based image guidance is also valuable for APBI (Accelerated Partial Breast Irradiation).

Gold Anchors can also be implanted percutaneously in breast, e.g. to facilitate a boost to breast tumors prior to surgery.

Gold Anchor is more visible on kV than surgical clips and attaches stronger to the tissue than surgical clips and traditional markers. It is also visible on ultrasound and MRI.

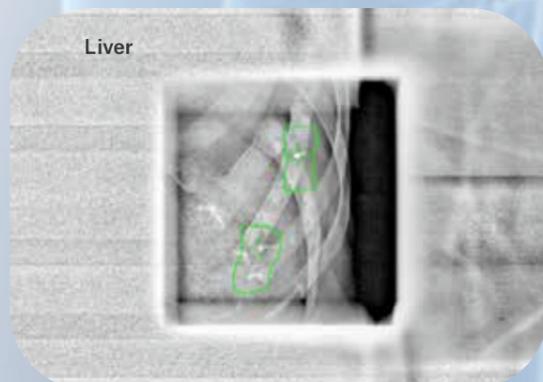


## Abdominal organs

Gold Anchor is available in the same type of ultrathin needles that have been used for over 60 years for fine needle aspiration cytology (FNAC) with no to very little harm.

Gold Anchor is suitable for percutaneous implantation in most abdominal tissue organs, e.g. liver, pancreas, kidney, adrenal gland, inguinal metastases, and oligometas in abdomen.

Intrafraction motion management using Gold Anchor can provide a new level of confidence when adopting more hypofractionated treatments for abdominal organs. To the right is a screen shot from Gold Anchors in a liver tracked with Varian Truebeam® Auto Beam Hold feature using periodic triggered kV-images.



## Placement through endoscopes

Gold Anchor can be transferred into 22G EBUS-TBNA or EUS-FNA needles. This enables placement of Gold Anchor through endoscope in central lung, esophagus, pancreas, and rectal tumors.

Transferring the Gold Anchor fiducial marker is easy with our new Gold Anchor Introducer (currently only available within the EU and USA).

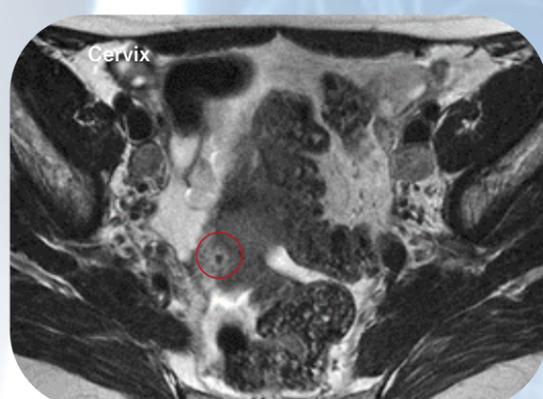


## Gynecologic organs

The cervix is prone to movement. Changes in target position and shape may be caused by rectum- and bladder-filling changes, but may also be due to tumor shrinkage during radiotherapy. Fiducial markers are therefore useful to guide both external-beam and internal radiotherapy (brachy).

Gold Anchor expands outside the needle and anchors in the tissue while traditional markers have a tendency to migrate and fall out of the vaginal wall and cervix.

The enhanced MRI visibility with Gold Anchor MR+ can improve the fusion of CT and MRI.

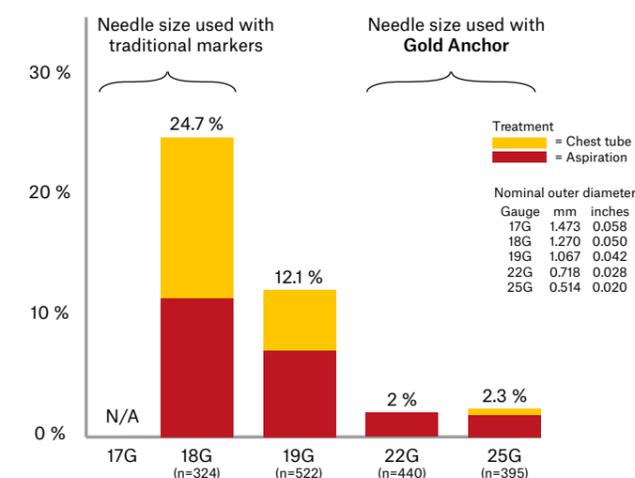


## Lung

Lung tumors can often be visualized with cone-beam CT but there are cases that can benefit from using fiducial markers, e.g. when there is atelectasis or when the tumor edges are blurry. Intrafraction motion management may also require implanted fiducials.

Gold Anchor's industry leading thin needles drastically reduce the risk of transthoracic implantation. Gold Anchor can also be placed with bronchoscopy needles.

Incidence of pneumothoraces needing treatment after percutaneous transthoracic needle aspiration biopsy of the lung



Source (18G and 19G): Geraghty, PR, Kee, ST, McFarlane, G, et al. CT-guided transthoracic needle aspiration biopsy of pulmonary nodules: needle size and pneumothorax rate. *Radiology* 2003;229:475-481  
 Source (22G): W S Chin, I Sing. The Chiba needle for percutaneous lung biopsy. *Sing Med J*. 1988; 29: 371-373  
 Source (25G): I. Naslund, P. Wersall, E. Castellanos, et al. Gold Anchor™ marker for IGRT, a new fiducial for high-precision radiotherapy. *Int J Radiat Oncol Biol Phys* 2009;75:S608-S609

## Prostate

With the thin Gold Anchor needle, transrectal insertion can be performed with a proven low risk of infection and without anesthesia.

If you prefer to implant markers transperineally you can also avoid anesthesia – using an EMLA patch 30 minutes before implantation is enough.

The Gold Anchor MR+ product line offers a unique MRI visibility that is ideal for fusion of CT and MR images and for MRI-only workflows.

Many hypofractionation/SBRT trials strongly recommend or require fiducial markers, to ensure a more accurate and safe treatment. This is not only true for the planning and setup but also during treatment as Gold Anchor can be tracked with kV-imaging to detect intrafraction prostate motion.

T2-weighted MRI of ball shaped Gold Anchor MR+

## Great visibility

### Also on MRI, thanks to unique material

The marker is only 0.28 mm or 0.40 mm thick, which improves the surface-to-volume ratio. The marker is made of a patented alloy of pure gold and 1.5% pure iron for improved MR visibility.

### Benefits

- Clearly visible on kV, CT, CBCT, Ultrasound and MRI
- Ideal for Proton Therapy with proven low dose perturbation
- Trackable with Accuray Synchrony® (CyberKnife® and Radixact®), Brainlab ExacTrac Dynamic® and with Varian Truebeam® Auto Beam Hold to detect and adjust for intrafraction motion.
- Reduced CT artifacts
- Easy registration of CT and MR images

## Instant stability

### Multiple cut-outs allow the marker to fold

The marker is passive and will form different shapes depending on implantation technique. Line shaped markers are useful for detecting plastic deformations and tilting. Completely folded (ball shaped) markers are suitable for systems with automatic marker detection.

The thin Gold Anchor needle, that causes minimal bleeding and swelling, in combination with the strong tissue attachment of the marker, makes it possible to proceed with CT and/or MR for dose plan on the same day as implantation.



*"In our radiation and interventional oncology practice at Austin Cancer Centers, we have found that by using the Gold Anchor system; this has allowed us to treat soft tissue tumors that were once considered inaccessible. Given the small gauge size of the needles, this has added a significant margin of safety that we had not previously enjoyed."*

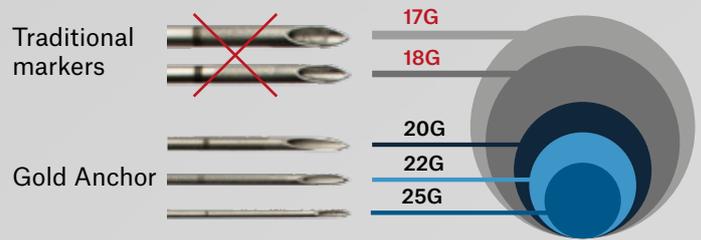
### Gregory K. Bell

M.D; Interventional Oncology, Austin Cancer Centers, USA

## Minimally invasive

### Industry leading thin needle

Fine needles for cytology have been used more than 60 years in all parts of the body with no to very little harm. Gold Anchor markers come preloaded in needles of the same size.



### Benefits

- Reduce implantation time
- Reduce patient discomfort
- Reduce complications from implantation



### Benefits

- Anchors directly
- Trust each marker
- Save lead time and travel

## Product codes

Needle Ø	● 25G (0.5 mm)		● 22G (0.7 mm)				● 20G (0.9 mm)	
	Introducer	15	8	15	20	25	20	35
Length (cm)								
Marker (mm)								
0.28 x 10	GATD-10	2515-10	2208-10	2215-10	2220-10	2225-10	2020-10	
0.28 x 20	GATD-20	2515-20			2220-20			
0.40 x 10			2208-10-B	2215-10-B	2220-10-B	2225-10-B	2020-10-B	2035-10-B
0.40 x 20			2208-20-B	2215-20-B	2220-20-B	2225-20-B	2020-20-B	

FDA cleared, CE marked, International Patents, Manufactured in Sweden



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