

PSID – Permanent Seed Implant Dosimetry – An innovative software for Prostate Brachytherapy with pre-, interactive online and post planning.

■ Interactive Online Planning

PSID supports interactive real time planning for transversal and longitudinal ultrasound imaging with precise matching of planned seed positions in relation to actual seed locations. Dose distributions, histograms and their figures of merits e.g. V100, D90 for the prostate or D1 for the urethra, are immediately updated to provide the physician

with the most current information. Seed positions are optimised automatically with respect to dose limits for the rectum and urethra.

■ Automatic Seed Detection

For post planning, PSID provides a state of the art search algorithm that identifies seed positions quickly and precisely – without the need to specify the number of seeds. This results in a substantial reduction in planning time by removing the need to verify every seed position.

■ Multiple Report Functions

An extensive and customisable report function provides physician defined information and streamlined output.

■ User Friendly

The PSID user interface features a modern and easy-to-use structure, including customisable tool bars to meet the users' treatment planning style.

■ Complete and Comprehensive

The BEBIG version of PSID provides pre-planning from ultrasound images to interactive online planning during surgery followed by post planning of the implant with precise and easy to use comprehensive software.

■ PSID Features

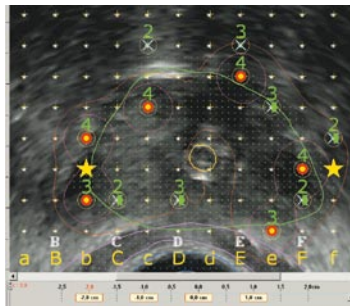
- Full compatibility with Microsoft Windows XP
- Multilingual user interface
- Context sensitive help function
- Meets AAPM TG 43 guidelines

■ Image Processing

- Image acquisition from US device via frame grabber
- Dicom3 import via TCP/IP network
- Import of image files in more than 20 formats, e.g. DICOM, TIFF, BMP, JPEG, GIF, PNG
- All standard template geometries are provided. Unique templates can be defined by the user.
- Fast manual contouring of anatomic structures
- Automatic interpolation of contours on all intermediate slices

■ Planning Features

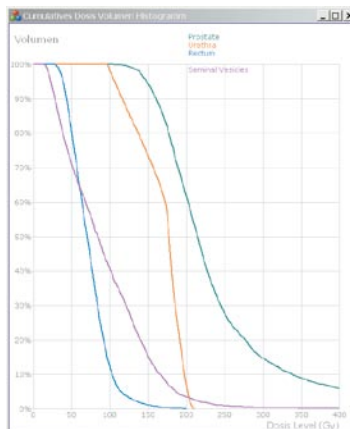
- Complete and comprehensive software for pre-planning, real time and post planning of prostate seed implants.
- Interactive online planning enables comparison of planned seed positions with actual real time positions.
- All data are immediately updated and displayed, including source data, histograms, isodoses, and seed placement.
- Manual and automatic plan optimisation even for previously placed seeds.
- Dose limiting capabilities to areas of interest, e.g. rectum, urethra.
- Simple editing (placing, deleting, moving) of seeds or strands



- An "undo" function for the last input makes editing of seeds easier.
- Display of dose rates and Hounsfield units at any cursor position
- 2D display of organ contours, isodoses, seeds and needles in sagittal and coronal view as well as user defined angles
- 3D display of organ contours, needles, seeds and isodoses
- Extensive seed library and additional seed editor
- User defined seeds and strands

■ Documentation

- All parameters of interest can be displayed online in a separate window.
- Extensive and customisable reports



■ Post Planning

- Co-registration for image fusion of CT, MR or US image sequences with up to 128 images per sequence
- Unique search algorithm for automatic seed detection substantially reduces treatment planning time

■ Configuration

System consists of:

- PSID Treatment Planning Software
- PSID Notebook
- PSID Frame Grabber Set
- Inkjet Printer

optional:

- 17" TFT monitor as additional display for the PSID Notebook
- A second PSID Notebook with pre-installed PSID as backup

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