

SEP 2 1998

K974770

Picker 510(k) Notice

ACQPLAN Summary of Safety and Effectiveness

This is a summary of the information submitted by Picker International, Inc. to the Office of Device Evaluation (ODE), specifically DRAERD of the FDA as required by the Federal Food, Drug, and Cosmetic Act as amended on November 18, 1990 in section 513(f)(3).

The ACQPLAN is an integrated 3-D RTP and simulation system embedded in a volumetric image processing computer environment. AcQPlan is intended to be used to plan radiation therapy treatments on linear accelerators and other similar teletherapy devices with x-ray beams of energies from 4 to 50 MV, cobalt-60, and electron beams with energies from 4 to 50 MeV of the entire human anatomy. It allows the treatment planner to employ such techniques as asymmetrically collimated fields, irregular fields, multi-leaf collimators, non-coplanar fields, bolus, fixed wedges, and Varian's enhanced dynamic wedges. It allows the treatment planner to take heterogeneities into account for photon beams using two versions of the Batho method or the Equivalent TAR (ETAR) method, and it uses a generalized Gaussian pencil beam model for electron beams. Using AcQPlan, the treatment planner can simultaneously visualize target and normal tissues and the computed 3-D dose distributions in great detail, on a real-time basis. The treatment planner develops treatment plans in a coordinate system accurately fixed to set-up marks on the patient, using CT and multi-modality information made possible by volumetric 3-D image processing. Tools for managing competing and complementary plans are provided. Tools, based on DVH plots, are provided for comparing competing plans. High quality DRRs and DCRs (digitally composited radiographs), with BEV and beam graphics superimposed, are generated to replace conventional simulator films. This device may include signal analysis and display equipment, patient and equipment supports, components and accessories.

Preliminary functional specifications and operator's instructions are included in the Attachments "B" and "C" respectively. Final documentation will be provided with production units.

The ACQPLAN is substantially equivalent to legally marketed devices and is under control of health care professionals who are trained and responsible for computed tomography examinations. Labeling (Product Specification and Operator's Manual) will be provided to the user of the equipment.

Picker adheres to FDA 21 CFR 820 and voluntary standards for safety and effectiveness (UL 187) all of which mandate that components are tested to minimize hazards (electrical, mechanical, and radiation). In addition, the system is designed to conform to IEC 601-1.

Effectiveness is established by Picker's evaluation throughout all phases of the ACQPLAN development. The product will perform in accordance with the development specifications. The ACQPLAN represents the current state-of-the-art technology, therefore, is equivalent to legally marketed devices.

Picker has reviewed all known information and performed an investigation as to the causes of safety and effectiveness concerning the ACQPLAN. In addition, all information contained in this 510(k) Notice is accurate and complete.



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Food and Drug Administration
9200 Corporate Boulevard
Rockville MD 20850

Robert L. Turocy
Regulatory Affairs and Compliance Manager
Pickèr International, Inc.
World Headquarters
595 Miner Road
Cleveland, Ohio 44143

Re: K974770
ACQPLAN
Dated: June 5, 1998
Received: June 9, 1998
Regulatory Class: II
21 CFR 892.5050/Procode: 90 MUJ

Dear Mr. Turocy:

We have reviewed your Section 510(k) notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (Premarket Approval), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 895. A substantially equivalent determination assumes compliance with the Current Good Manufacturing Practice requirements, as set forth in the Quality System Regulation (QS) for Medical Devices: General regulation (21 CFR Part 820) and that, through periodic QS inspections, the Food and Drug Administration (FDA) will verify such assumptions. Failure to comply with the GMP regulation may result in regulatory action. In addition, FDA may publish further announcements concerning your device in the Federal Register. Please note: this response to your premarket notification submission does not affect any obligation you might have under sections 531 through 542 of the Act for devices under the Electronic Product Radiation Control provisions, or other Federal laws or regulations.

This letter will allow you to begin marketing your device as described in your 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801 and additionally 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4613. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address "<http://www.fda.gov/cdrh/dsma/dsmamain.html>".

Sincerely yours,

Lillian Yin, Ph.D.
Director, Division of Reproductive,
Abdominal, Ear, Nose and Throat
and Radiological Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

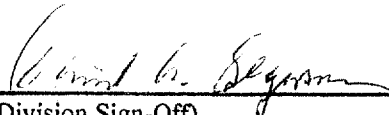
510(K) Number (if known): K97 4770

Device Name: ACQPLAN

Indications for Use:

The ACQPLAN is an integrated 3-D RTP and simulation system embedded in a volumetric image processing computer environment. AcQPlan is intended to be used to plan radiation therapy treatments on linear accelerators and other similar teletherapy devices with x-ray beams of energies from 4 to 50 MV, cobalt-60, and electron beams with energies from 4 to 50 MeV of the entire human anatomy. It allows the treatment planner to employ such techniques as asymmetrically collimated fields, irregular fields, multi-leaf collimators, non-coplanar fields, bolus, fixed wedges, and Varian's enhanced dynamic wedges. It allows the treatment planner to take heterogeneities into account for photon beams using two versions of the Batho method or the Equivalent TAR (ETAR) method, and it uses a generalized Gaussian pencil beam model for electron beams. Using AcQPlan, the treatment planner can simultaneously visualize target and normal tissues and the computed 3-D dose distributions in great detail, on a real-time basis. The treatment planner develops treatment plans in a coordinate system accurately fixed to set-up marks on the patient, using CT and multi-modality information made possible by volumetric 3-D image processing. Tools for managing competing and complementary plans are provided. Tools, based on DVH plots, are provided for comparing competing plans. High quality DRRs and DCRs (digitally composited radiographs), with BEV and beam graphics superimposed, are generated to replace conventional simulator films. This device may include signal analysis and display equipment, patient and equipment supports, components and accessories. This device may include signal analysis and display equipment, patient and equipment supports, components and accessories.

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)



(Division Sign-Off)
Division of Reproductive, Abdominal, ENT,
and Radiological Devices

510(k) Number K974770

Prescription Use
(Per 21 CFR 801.109)

OR

Over-The Counter Use _____
(Optional Format 1-2-96)