Medi+Physics Kidney Scintigraphin* puts mercury back in the thermometer.

Normal Study

400 k / 363 SEC
HIGH-RESOLUTION

200 k / 377 SEC
200 k / 442 SEC
PINHOLE

Courtesy of DRS. Paul Weber and L.V. Dos Remedios

The above study is an example of renal images that you can expect with Kidney Scintigraphin.™

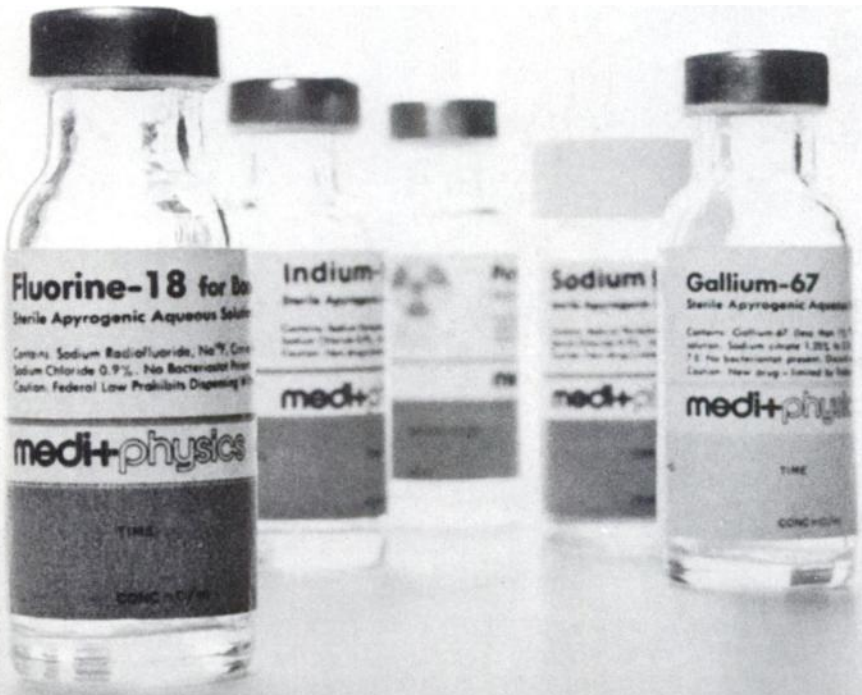
Kidney Scintigraphin™ (2,3 dimercaptosuccinic acid) is a new investigational radiopharmaceutical developed by Medi + Physics. The biodistribution is similar to chlormerodrin.

For information on the clinical use and licensure of Medi + Physics Kidney Scintigraphin™ call toll free (800) 227-0483 or in California (800) 772-2446.
West Coast: Main Office 5855 Christie Avenue, Emeryville California. Los Angeles (213) 245-5751/Midwest: Chicago (312) 671-5444/East Coast: South Plainfield, New Jersey (201) 757-0500/Canada: Ottawa, Ontario (613) 225-2444. Vancouver, British Columbia (604) 980-9412.

*** An Investigational New Drug.**

medi+physics

First
Fluorine-18
now
Iodine-123
Gallium-67
Indium-111
Potassium-43

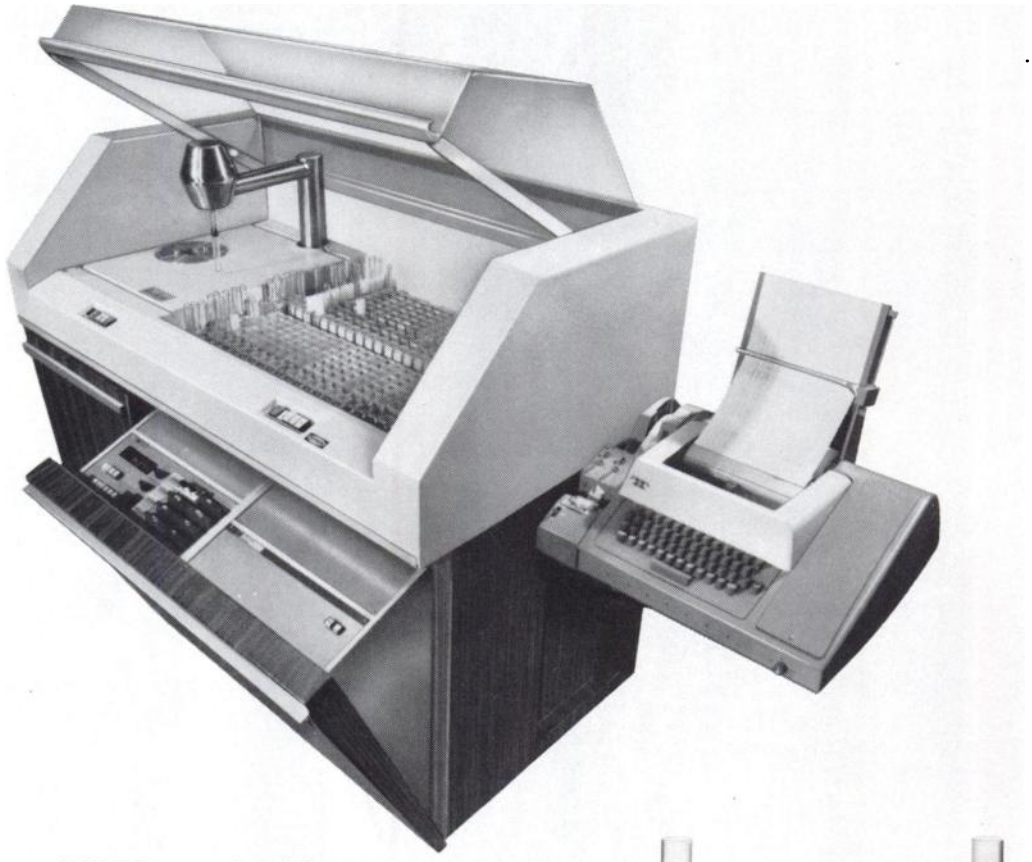


These cyclotron produced products are now available daily, Monday thru Friday from Medi+Physics. For further information, please contact the Medi+Physics Laboratory nearest you. In San Francisco our main office is at 5855 Christie Ave., Emeryville, California (415) 658-2184. In Los Angeles phone (213) 245-5751, in Chicago (312) 671-5444, or in New York/New Jersey (201) 757-0500.

medi+physics

GammaSet 500

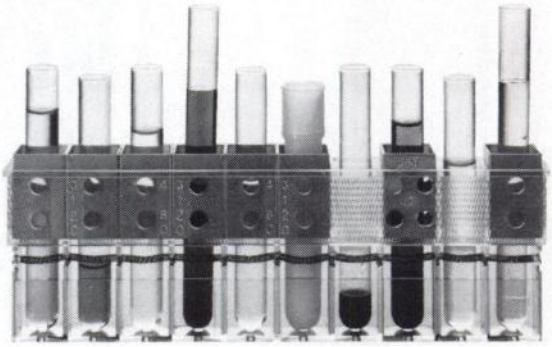
More than just a sample changer
A programmable multi-user system



The Raytheon/ICN GammaSet 500 adds a major new dimension to automatic gamma counters: The unique Programmable Sample Cassette. Each 10-sample cassette can be easily programmed for automatic selection of counting parameters and user identification. The cassette can be coded for preset time, preset count, background subtract, and isotope selection on the 4-mode, dual scaler. The cassette concept also makes system loading and unloading considerably faster.

And there are other key reasons why the GammaSet 500 is more than just a sample changer:

Contamination-proof "Set and Forget" Operation. Sample counting/changing operation — including shut-off — is completely automatic and under full protection of the transparent cover. The foldaway electronics drawer, when closed, keeps controls from being changed accidentally. Data is recorded by printing lister, teletypewriter or punched paper tape.



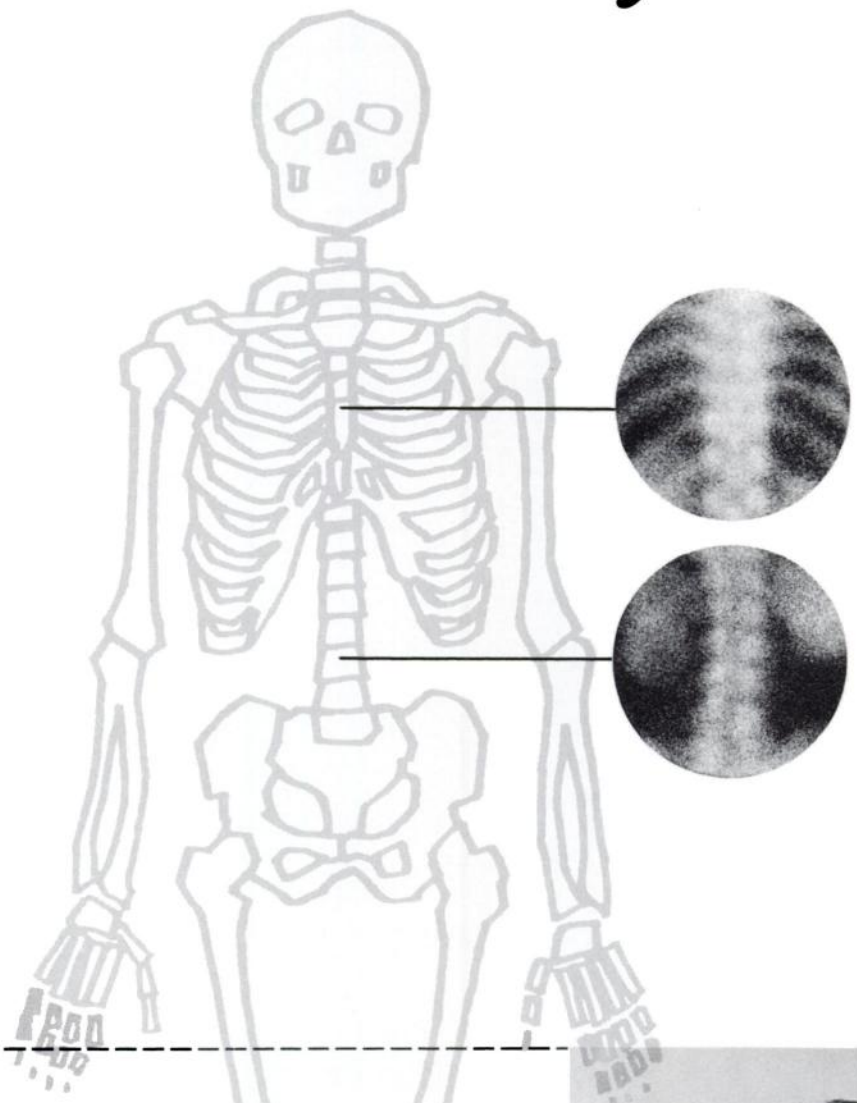
Multi-User Capability. Rapid loading, 500 sample capacity accommodates many different users with various test requirements. Cassettes can be loaded in random order and interrupted at any time for manual counting.

In virtually any gamma counting application the GammaSet 500 will give new operating convenience, versatility and economy.

For full details, write Raytheon Company, Medical Electronics, 40 Second Avenue, Waltham, Mass. 02154. (617) 890-3240.

RAYTHEON

Get the inside story.



Name: _____

Affiliation: _____

_____

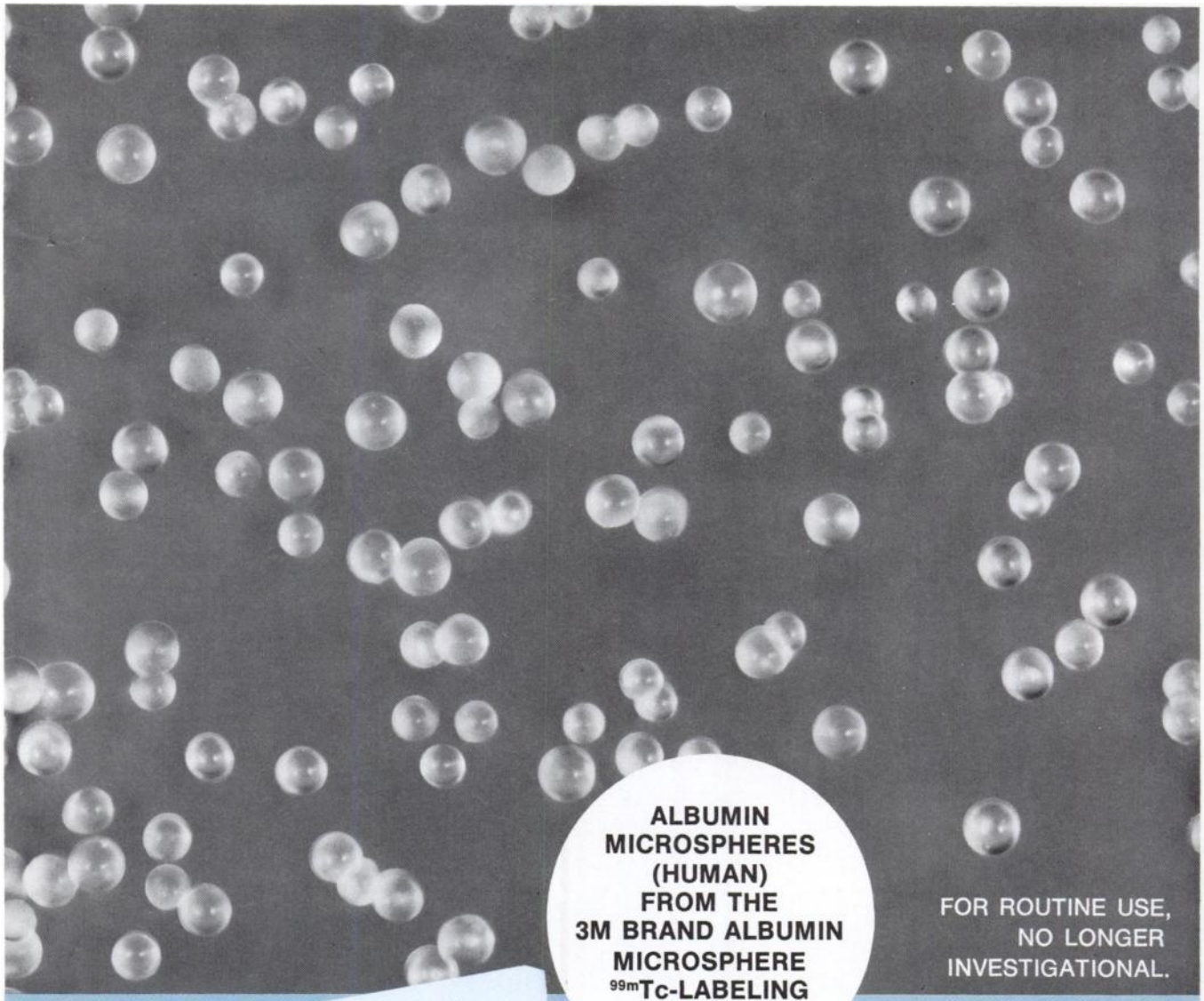
Address: _____

_____

_____ Zip: _____

New England Nuclear
Radiopharmaceutical Division
Atomlight Place, North Billerica, Mass. 01862
Telephone (617) 667-9531

Canada: NEN Canada Ltd., Dorval, Quebec, Tel: (514) 636-4971, Telex: 05-821808
Europe: NEN Chemicals GmbH, D6072 Dreieichenhain, Siemensstrasse 1, Germany. Tel: Langen (06103) 85035



ALBUMIN MICROSPHERES (HUMAN) FROM THE 3M BRAND ALBUMIN MICROSPHERE ^{99m}Tc-LABELING KIT

FOR ROUTINE USE, NO LONGER INVESTIGATIONAL.

FOR CONSISTENT LUNG IMAGES day after day after day!

USE ^{99m}Tc ALBUMIN MICROSPHERES

• **Uniform Shape and Size**
Perfectly spherical, the 3M Albumin Microspheres are uniformly sized to 15-30 microns in diameter. This uniformity, coupled with an extremely low tendency to agglomerate, results in truer images of lung perfusion. The result — no hot spots or extra-lung activity.

• **Integral, yet Biodegradable**
Each Albumin Microsphere is a single homogeneous sphere of albumin — they won't disintegrate in the vial or syringe. Yet, microspheres readily clear from the lung. Pulmonary clearance half-times are long enough for multiple view imaging but are still short enough to allow daily imaging, if required. Microscopic analysis of lung tissue in the mouse showed 99 percent of the administered microspheres were gone after 29 hours.[1]

1. Data on file at the 3M Company and the Bureau of Biologics.

• **Eliminate Interference from "Free" Technetium**
"Free" isotope need no longer interfere with the scan. The unique filter construction of the Microsphere Labeling Vial allows the free isotope to be removed, leaving just labeled microspheres for suspension.

• **Stable Kit**
Currently the expiration date of each kit is *6 months* after the date of manufacture. You can stock the kit and have it available for immediate use. Even a department doing a moderate amount of lung imaging can take advantage of quantity discounts.

• **Each Lot FDA Approved**
Thoroughly tested by 3M, each lot is checked by the Bureau of Biologics, FDA, and approved for shipment. This provides a double-check of sterility, lack of pyrogens, and all the important performance parameters of the kit.

INDICATIONS Scintillation imaging of the lungs with ^{99m}Tc-Labeled Albumin Microspheres is indicated as an adjunct to other diagnostic procedures whenever information about pulmonary circulation is desired.

CONTRAINDICATIONS The safety of Albumin Microspheres in patients with a known right-to-left cardiac shunt has not been established and its use in such patients is contraindicated.

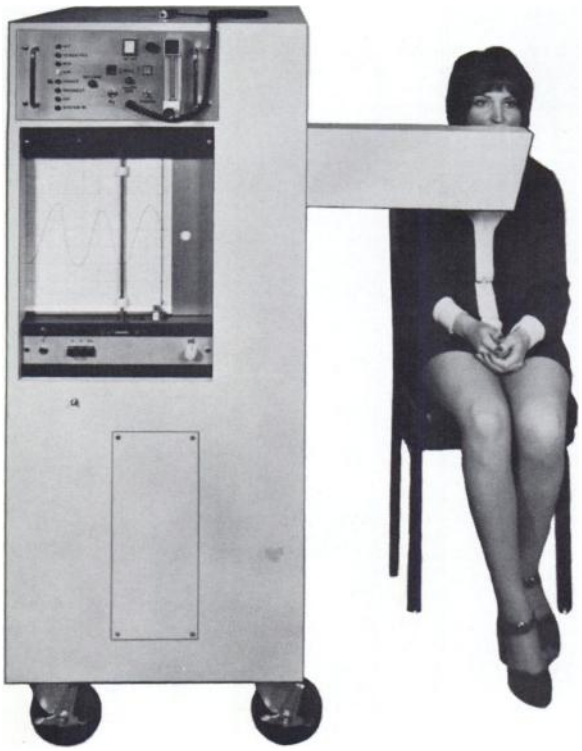
SIDE EFFECTS Although no anaphylactoid reactions have been reported in patients following the administration of Albumin Microspheres, the possibility should be considered that hypersensitivity reactions may occur rarely in patients who receive additional doses of the Microspheres.

HOW SUPPLIED Each kit contains five labeling units. Each labeling unit contains one day's supply of Albumin Microspheres (5mg — enough for 5 to 7 patients) plus all the reagents necessary to attach technetium to the microspheres.

For detailed information about Microspheres and the 3M Brand Albumin Microsphere ^{99m}Tc-Labeling Kit, write: **Nuclear Products for Medicine,** 3M Company, 3M Center, St. Paul, Minnesota 55101, or phone TOLL FREE (800) 328-1671.

3M COMPANY

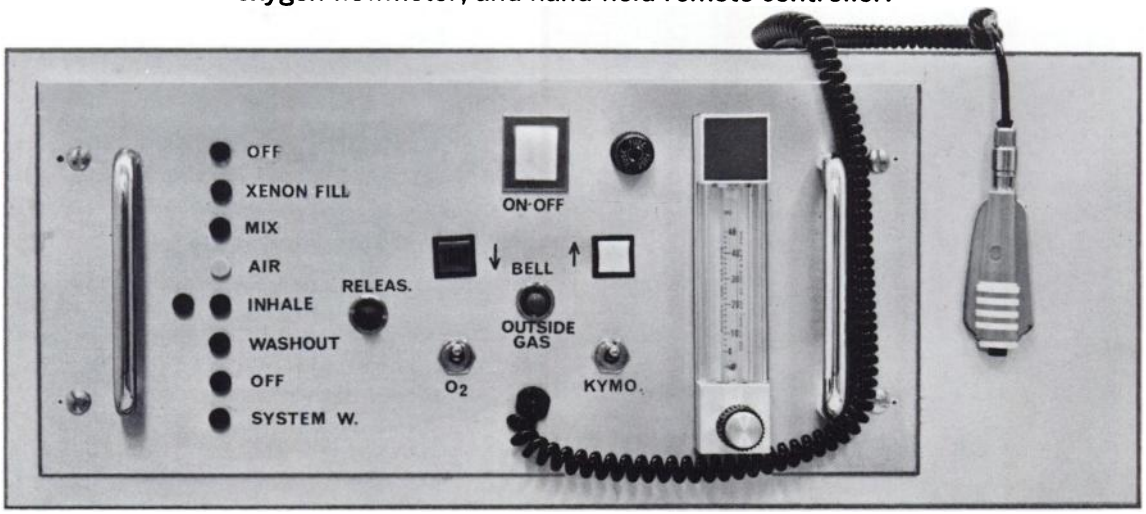
NEW, FULLY AUTOMATIC XENON-133 LUNG FUNCTION UNIT



Makes pulmonary studies simpler and safer for your patients and your operating personnel

- Hand controller automatically indexes entire system.
- Automatically provides a homogeneous gas mixture for patient.
- Permits resistance-free breathing in both equilibrium and washout cycles.
- 7.5-liter spirometer and kymograph provide accurate data display.
- Self-contained xenon and oxygen. Also accepts external xenon source.
- Arm-mounted mouthpiece adjusts vertically from 40" to 50" above floor.
- Adapter available for supine studies.
- Fully shielded.

CONTROL PANEL showing automatic and manual control functions, oxygen flowmeter, and hand-held remote controller.



Send for full details. Ask for Bulletin 125-B

NUCLEAR ASSOCIATES, INC.
Subsidiary of
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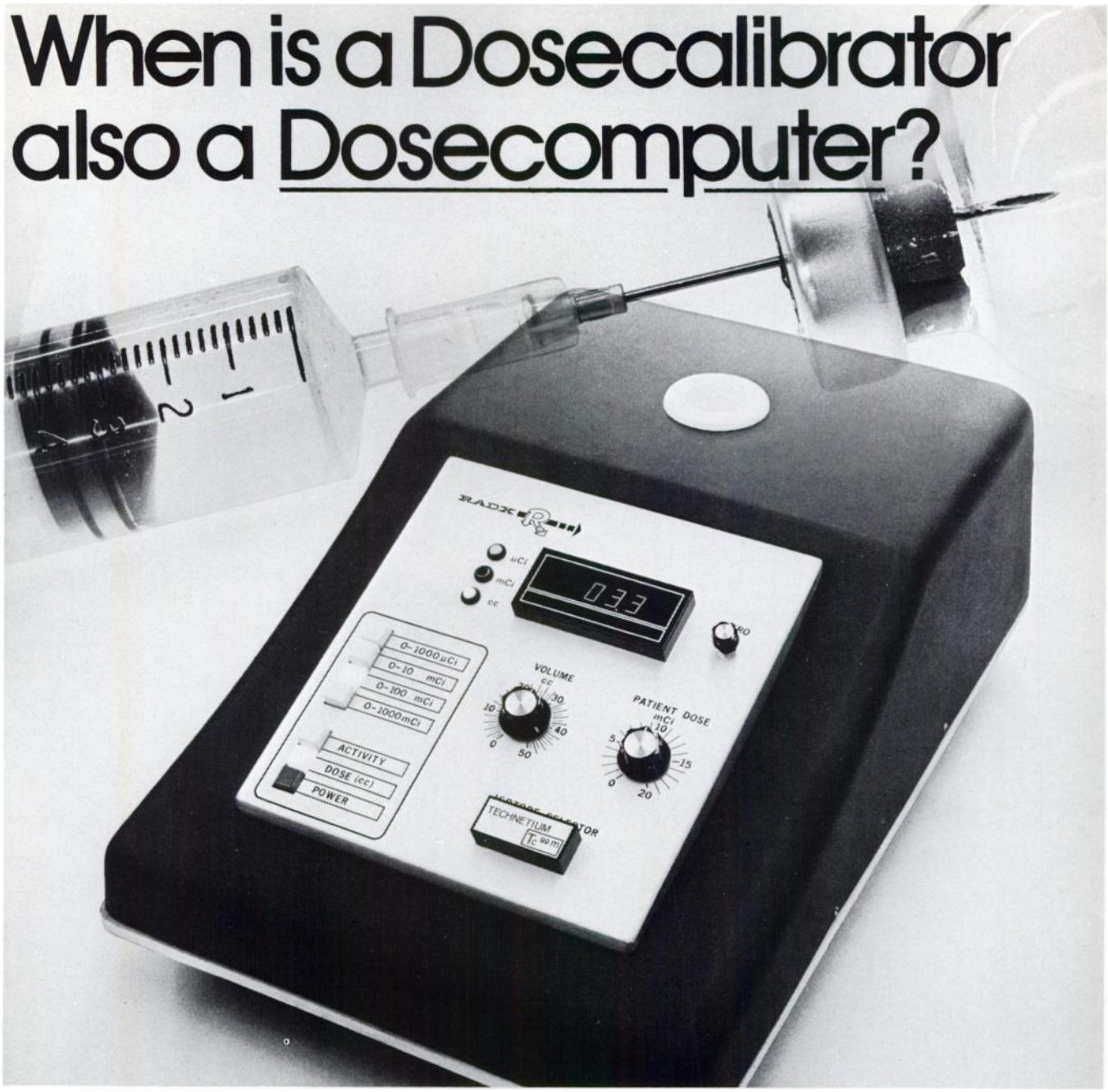
35 URBAN AVE. • WESTBURY, N.Y. 11590 • (516) 333-9344

When is a Dosecalibrator also a Dosecomputer?



When it's a RADX Mark V.

The RADX Mark V was designed specifically for Nuclear Medicine departments, with digital read-out and an oversize well-type ionization chamber for high statistical accuracy. No geometric errors. Impervious to barometric pressure changes.

Only the RADX Mark V dosecalibrator measures the activity of radionuclides from 1 µCi to 1000 mCi, then computes the exact volume needed for patient injection.

Programming the Mark V for various isotopes is error-free. You simply plug in a module for the isotope you are assaying. The Mark V may be customized to your specific needs by acquiring only the modules corresponding to the isotopes you are currently using. However additional modules may be added at any time. Updating is simple and economical.

And as if all of this were not enough, RADX recognizes that a day without your Mark V is like a day without sunshine. If during the warranty period, your Mark V does not perform within stated specifications, RADX will air express you a loaner to use while yours is being repaired—at no charge.

Then consider that the Mark V costs much less than other dosecalibrators that do not provide all of these features. Now call RADX.

RADX CORP.

P.O. Box 19164 • Houston, Texas 77024 • (713) 468-9628


Ultra-TechneKow
Ultra-TechneKow FM

Only someone who makes all these can be sure you get the right one

In technetium-99m generators, Mallinckrodt is the only someone who makes all these.

Because we have a complete line of generators, we can make sure you get the right one for your application, whether you require 50 mCi or 500 mCi. You'll not only get the right technetium generator, you'll get one you can rely on. Every Mallinckrodt Ultra-TechneKow® Generator column is sterilized by autoclaving, and each generator is eluted and tested in our laboratories before shipment.

The Ultra-TechneKow® Generator provides every feature you need. Uniformly high yields help you maintain scanning schedules. The "Ion Control" process keeps aluminum levels at almost undetectable levels. A minimum of 1½" of lead shielding and short elution time safeguard the technician, by providing minimum radiation exposure. A 500 ml saline supply permits an uninterrupted milking schedule.

If you use technetium-99m generators in your laboratory, deal with the manufacturer who sells you what you need. Not just what he has.

Write for full information, or call (314) 731-4141 (Extension 339) collect.

Choice of 12 Ultra-TechneKow® Generators

MOLY		FISSION MOLY	
50 mCi	Cat. No. 006	50 mCi	Cat. No. 100
100 mCi	Cat. No. 007	100 mCi	Cat. No. 101
150 mCi	Cat. No. 012	200 mCi	Cat. No. 102
200 mCi	Cat. No. 008	300 mCi	Cat. No. 103
300 mCi	Cat. No. 009	400 mCi	Cat. No. 104
400 mCi	Cat. No. 010		
500 mCi	Cat. No. 011		

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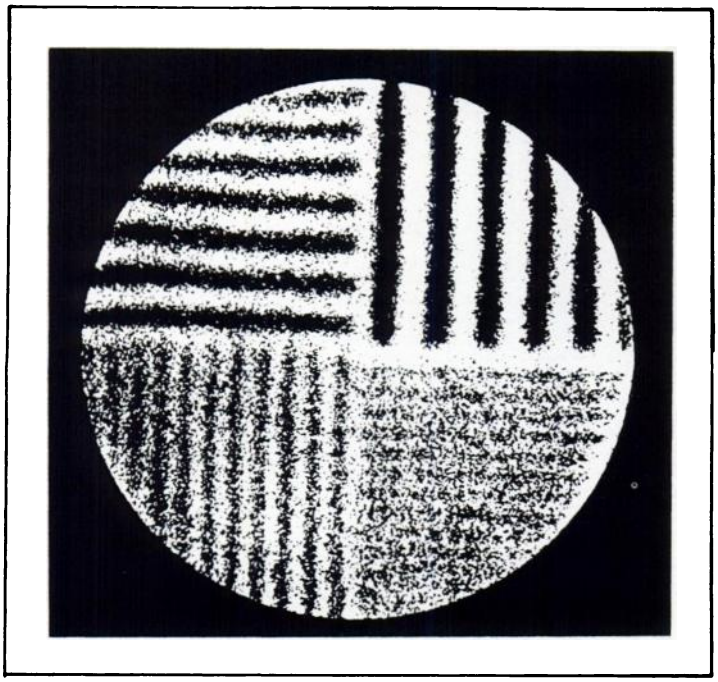
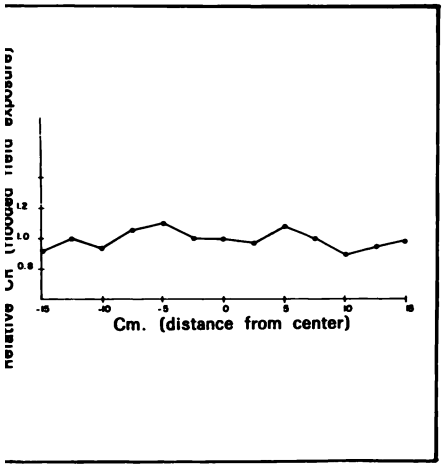
St. Louis, Missouri 63160



salesmen talk bar phantoms

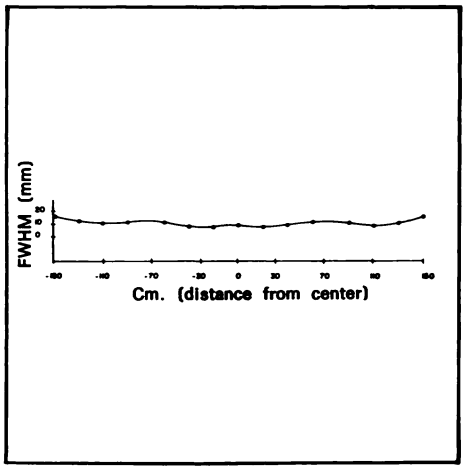
results with elscint's

Efficiency as Function of Position on Detector Face



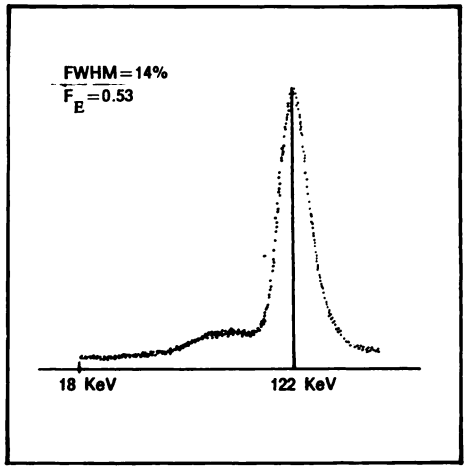
±10% uniformity of efficiency over detector area with a 305 mm diameter.

FWHM as Function of Position on Detector Face



Average FWHM over field of 300 mm: 9 mm. Will distinguish bars at less than 3 mm separation. These values can be improved even further if the camera is calibrated for a smaller effective area.

^{57}Co Spectrum



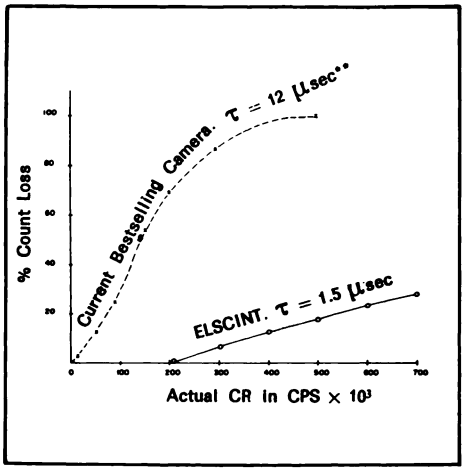
$$F_E = \frac{\text{Usable counts for image production}^*}{\text{Total count output from P.M. tubes}}$$

* This parameter is a function of the energy of the incident radiation and increases with improved energy resolution. It equals the counts measured with the window width used to obtain the specified intrinsic spatial resolution (FWHM) of the camera.

But performance is determined by hard specifications. Polaroid snapshots of bar phantoms are no substitute. Elscint's new Gamma Camera leads the way out of the labyrinth with documented proof of performance superiority. Be fair, though, and ask our competitors to produce their comparison specifications.

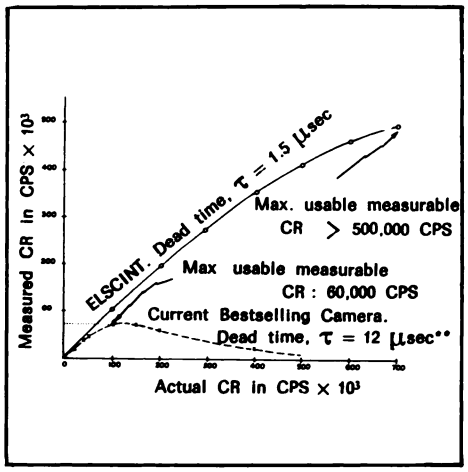
new gamma camera

% Count Loss vs. Actual Countrate



The dead time, τ, is one of the crucial parameters of a camera since it determines the maximum usable countrate. This implies use of the camera for short frame time dynamic studies using very short half-life radiopharmaceuticals, of which high doses may be administered.

Measured Counts vs. Actual Counts



This curve clearly shows that a 12 μsec dead time camera is virtually useless even for countrates from as little as 70 Kcps. The ELSCINT camera with its 1.5 μsec is usable for countrates higher than 500 Kcps.

** J. Nucl. Medicine, vol. 14, No. 6; pp 383-384, 1973.

Performance Figure-of-Merit

$$M_E = \frac{F_E\sqrt{A_1 A_2}}{\pi\tau(\bar{\beta})^2} = \frac{F_E R_1 R_2}{\tau(\bar{\beta})^2} = 93.6\,(\mu\text{Sec})^{-1}$$

- F_E = Usable count fraction (0.53)
- A_1 = Detector area with ±10% uniform response to flooded field exposure.
- R_1 = Radius of A_1 (152.5 mm)
- A_2 = Detector area with intrinsic FWHM ≤ 10 mm
- R_2 = Radius of A_2 (130 mm)
- τ = System deadtime in μsec (1.5)
- $\bar{\beta}$ = Average FWHM within A_1 (9 mm)

The gamma camera is a working system of many interacting factors, expressed in the performance figure-of-merit, M_E.

elscint

Advanced Technology Center • P.O.Box 5258 • Haifa • Israel

Tel: (04) 522516 • Telex: 4-654 • Cables: ELSNT IL.

Great Britain: Elscint (GB), 10 Cryden Chambers, 119 Oxford Street, London, WIR IPA, Tel: 437-5388.

France: Elscint S.A.R.L., 11 Rue Lefevre 78000 Versailles. Tel: 9563120. Telex: 60577

Germany: Elscint GmbH, Freudensbergstrasse 27, 62 Wiesbaden-Schierstein. Tel: (06121) 2786. Telex: 4186299.

Brazil: Elscint Brazil, Ave. Rio Branco 156 S/2537. c/o BIEX, Rio De Janeiro. Tel: 221-2565.

USA: Elscint Inc., 470 Commercial Ave., Palisades Park, N.J. 07650. Tel: (201) 461-5406.

But performance is determined by hard specifications. Polaroid snapshots of bar phantoms are no substitute. Elscint's new Gamma Camera leads the way out of the labyrinth with documented proof of performance superiority. Be fair, though, and ask our competitors to produce their comparison specifications.

new gamma camera

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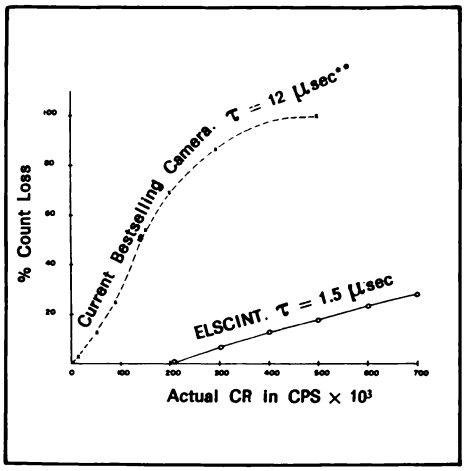

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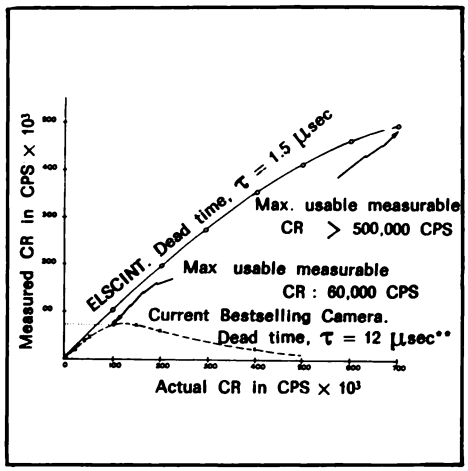

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Brazil: Elscint Brazil, Ave. Rio Branco 156 S/2537. c/o BIEX, Rio De Janeiro. Tel: 221-2565.
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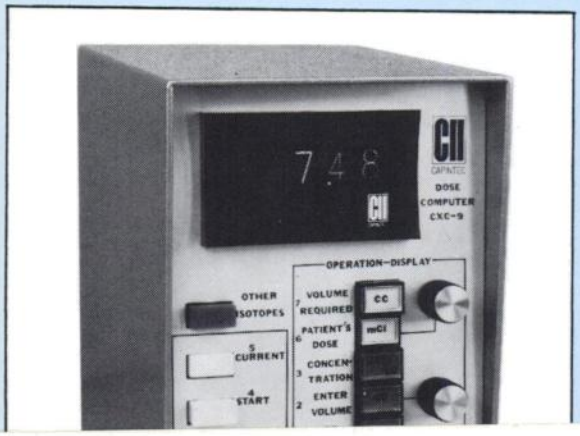
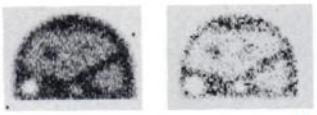
From the number one calibrator manufacturer.. Capintec.

Radio-Pharmaceutical CXC·9 Dose Computer incorporating "Built·In Tc99m Memory"

(When used with any Dose Calibrator)



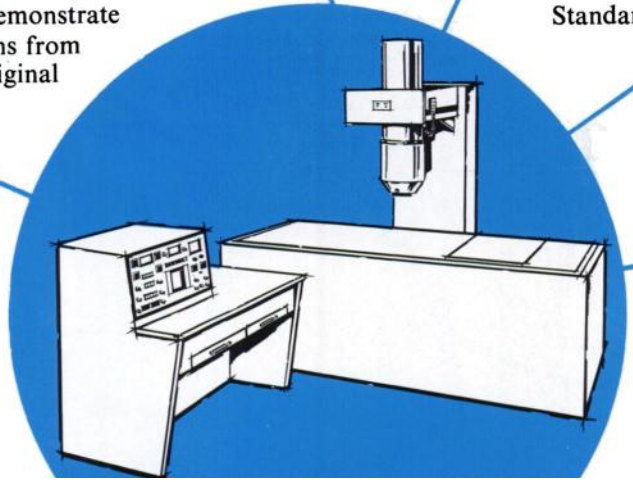
series 84—the total scanning system



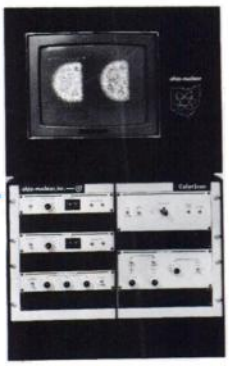
8416 MEMOSCAN—Tape Replay System
Records scan data on magnetic tape which can be played back to produce additional photorecordings. During playback, changes may (or may not) be made in background erase, intensity, and contrast enhancement to provide a readout different from the original. Regenerations can be made at half-size if desired. Brain phantoms above demonstrate variations from same original scan.

8415 PROBE MOUNTED RATEMETERS
To facilitate set-up and positioning, ratemeters can be mounted on the detector.

INTEGRAL PATIENT COUCH
Standard on all Series 84 Scanners.



NOISELESS CRT DISPLAY
8 x 10-cm storage monitor (which can also be used in non-store mode) displays scan progress without annoying noise.



8417 COLORSCAN —Interactive Video Display
A scanner data system capable of

Nuclear Data's new MED STOR™ is a moderately priced computerized image storage and processing system that can be used with *any* scintillation camera. MED STOR provides computer controlled acquisition of static and dynamic function data, selection of up to four regions of interest, and simultaneous generation of up to four time/activity histograms. It also provides variable image framing rates, high speed list mode acquisition, file and display of patient and study data, static image display selections of 64x64, 128x128, or even 256x256 data points, and almost instant data storage and retrieval by high density magnetic computer tape. This latter capability permits playback of an image in seconds regardless of the real time required for the camera to produce the image.

Though MED STOR is a real computerized system, you don't have to be a programmer or computer expert to use it fully. MED STOR has complete built-in software and operates totally by simple understandable push-buttons. And, because MED STOR is a true computerized system, it represents only the beginning of your department's image processing and storage capability. MED STOR readily upgrades at any time to the advanced and programmable MED II image storage and processing system.

Important questions to consider before you computerize your scintillation camera.

(1) Which is the only company that actually makes its own scintillation cameras and medical computers? **(Nuclear Data)**

(2) Who is the most experienced producer of computerized image storage and processing systems in the world? **(Nuclear Data)**

(3) Which company has the most such systems in routine clinical use? **(Nuclear Data)**

(4) What one computerized image storage and processing system has done away with the typewriter keyboard and is operated totally by simple pushbuttons? **(Med Stor)**

(5) What company has the most experience in interfacing computers with cameras? **(Nuclear Data)**

(6) Which modestly-priced image storage and processing system is a real computer and not just a hard-wired multichannel analyzer? **(Med Stor)**

(7) Which company can be described in these words: "...The most sophisticated developer of software in this field and who has been doing it for a longer time than anyone else and who has more clinical software than anyone else in this field...."? **(Nuclear Data)**

(8) Which computerized image storage and processing system can actually be mastered in about two hours? **(Med Stor)**

(9) Which computerized image storage and processing system can be readily and most inexpensively upgraded to Nuclear Data's advanced MED II? **(Med Stor)**

(10) Who has an active user's group that exchanges and develops clinical software? **(Nuclear Data)**

(11) Which computerized image storage and processing system has been successfully interfaced with every major scintillation camera? **(Med Stor)**

(12) Which computerized image storage and processing system is accompanied by a Nuclear medical computer application specialist? **(Med Stor)**

These are some important reasons for computerizing your scintillation camera with MED STOR. There are more in store. To learn about them, write to the Nuclear Data office nearest you.

NUCLEAR DATA INC.

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Post Office Box 451
Palatine, Illinois 60067
Tel: 312/885-4700

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England, U.K.
Tel: 22733, 25357

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Nuclear Data GmbH
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Instruments AB
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Our two new Micro BIOPETTE semi-automatic pipettes are especially designed for RIA. They're accurate, easy to use and particularly suited for use where repetitive reproducible pipetting is required. They are complete with BIOTIP disposable glass tips, siliconized for micro pipetting.

The Schwarz/Mann Micro BIOPETTE is available in two size ranges. The 100 lambda size provides 3 volumes: 50 ul, 70 ul and 100 ul. The 30 lambda size provides 4 volumes: 10 ul, 15 ul, 20 ul, and 30 ul.

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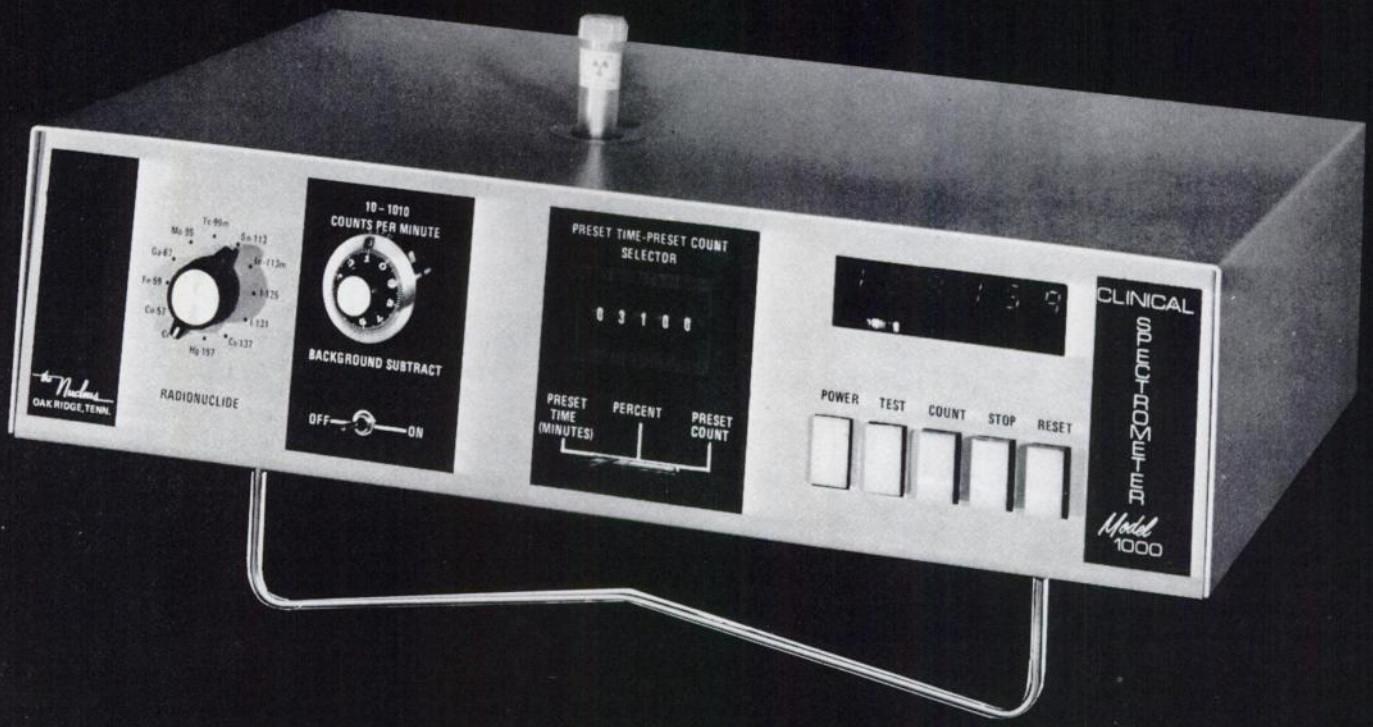

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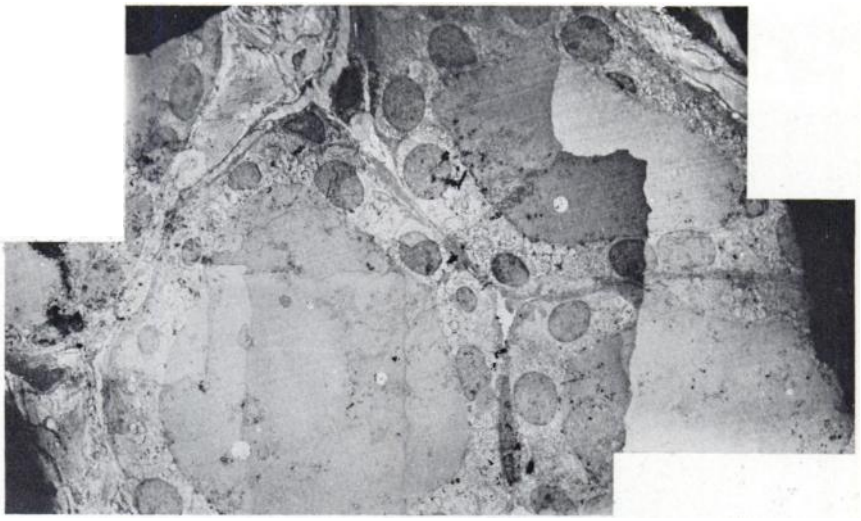

Electron micrograph of thyroid follicle by Allen Schwandt, M.D. and Jerald Nelson, M.D. School Of Medicine, Loma Linda University.

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A NEW CONCEPT IN T_4 DETERMINATIONS

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CRT CAMERAS ARE DECEPTIVE

Not really. The deception lies in the simple seeming task of photographing the oscilloscope. The photographic results must serve the diagnostician. The quality of what he holds before the light determines the quality of his evaluation. That is what makes the hard copy and the camera system that produces it of such critical importance. No one system is appropriate for everyone. NM departments differ in needs. So do the diagnosticians differ in their personal requirements. And camera systems produce different hard copy. If oscilloscope photography is deceptively simple, so also is choosing the camera equipment for your department. Appropriate hard copy is a serious enough problem to deserve the serious attention of one company. Dunn Instruments.

Help from Dunn Instruments is not like taking help from strangers. We know the entire scintillation process and have developed many instruments that serve nuclear medicine. We even offer our own Model 750 Multi-Format Camera System. Let us help you solve your hard copy problems. All CRT cameras have their virtues. Their limitations may not be obvious. For your own needs you should consider such factors as true image size, film contrast and grey scale latitudes, the difficulties of large group viewing, film cost, availability and storage problems, and camera maintenance. There's also good photography. Nobody likes to look at bad pictures, particularly the refering physicians on your staff.

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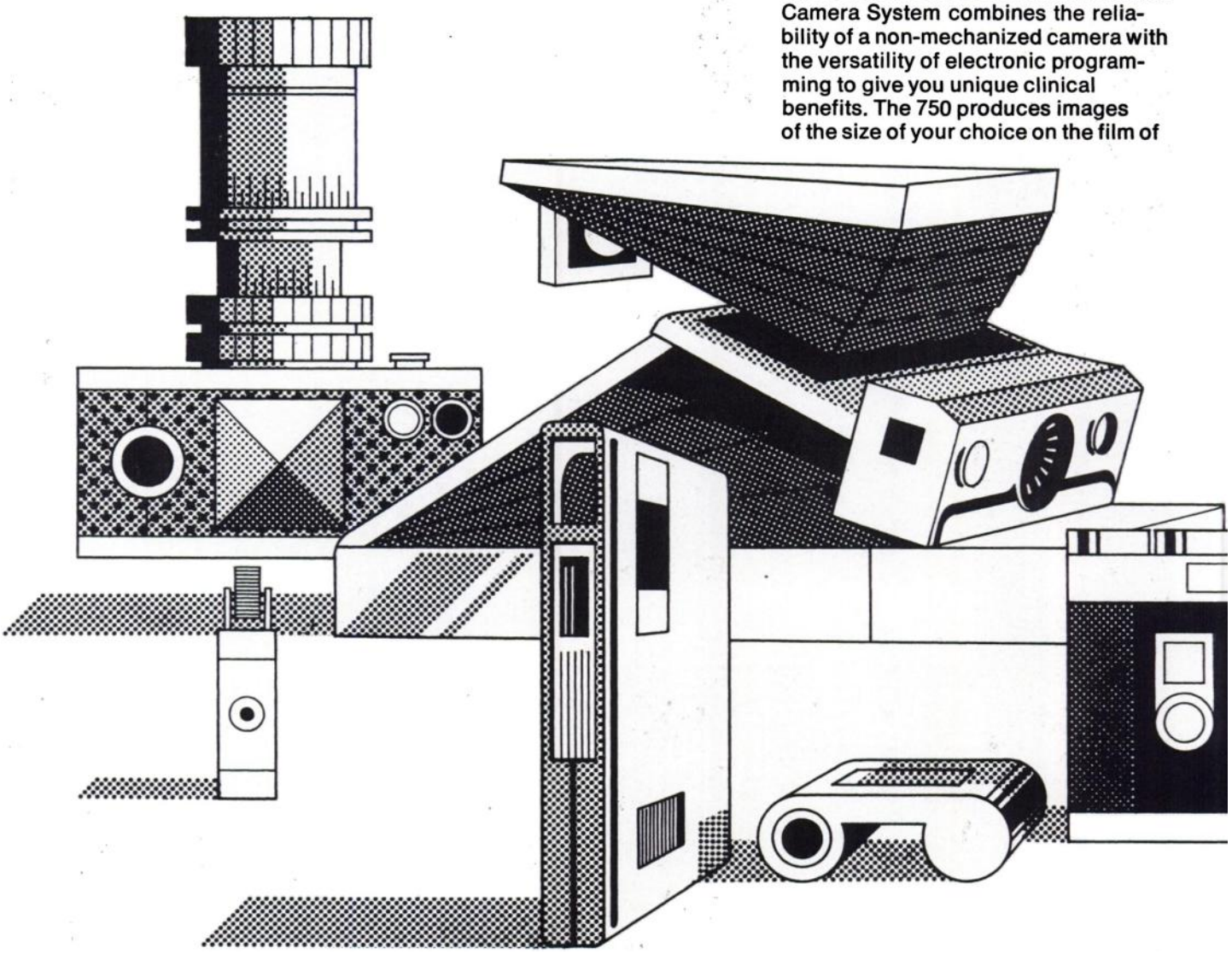
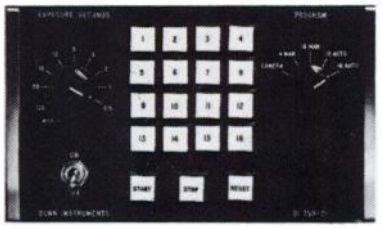


your choice. It's versatile and flexible means of producing high quality transparency scintiphotos on X-ray film, a widely accepted medium for diagnostic imaging. Of course, the 750 may not solve your needs. Whatever they are, let Dunn Instruments help you define and solve them. We're in this together, you know.



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The easy way to prepare RIA samples

The LKB Ultrolab® Sample Processor can be programmed to do the processing of your RIA samples at a fast rate, in batches of 100.

The LKB sample processor will transfer single or double samples to test tubes at the rate of 400 tubes an hour. And it will add up to 3 reagents at the rate of 800 an hour. The prepared sample is then given a thorough mixing by rapid rotation. The actual throughput is 100 samples in 15 minutes.

Suspensions of Sephadex and dextran-coated charcoal may be used to separate the bound antigens from the free antigens. As it is being dispensed, the suspension is agitated to prevent it from settling. And for the final measurements of radioactivity the samples can be transferred to the renowned LKB-Wallac automatic Gamma and Liquid Scintillation counters.

Remember, LKB can provide the complete system for RIA—from sample preparation right through to a digital printout of results. And specific samples such as standards can be positively identified in the printout.

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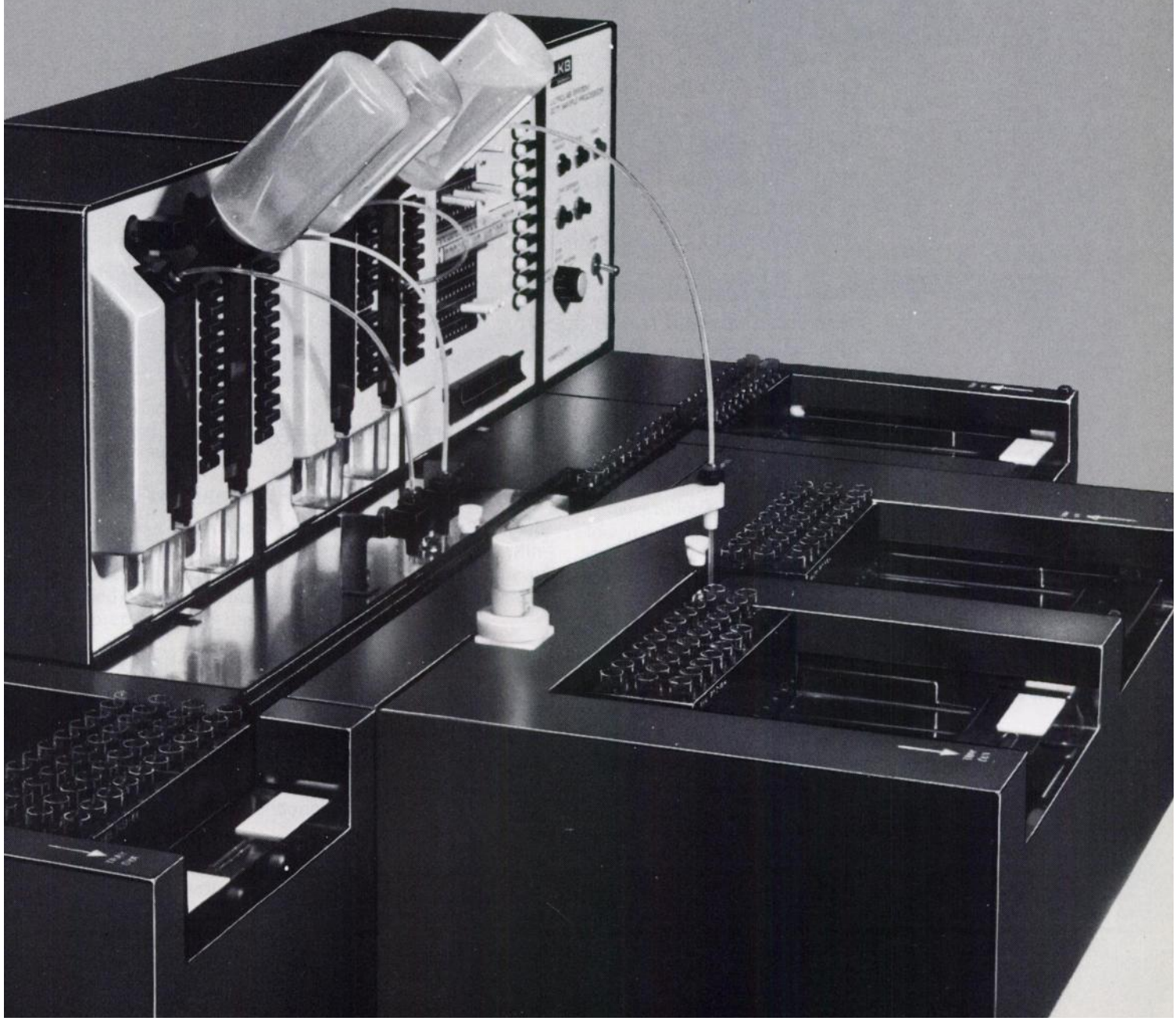

Total system RIA

POST-OPERATIVE DEEP VEIN THROMBOSIS:

"The best diagnostic tool at present..."*

*Lancet, Sept 25, 693-694, 1971.

Fibrinogen is the simplest of all current diagnostic methods; unlike phlebography, which requires complex, expensive equipment and movement of the patient, the fibrinogen technique is economically and practically viable in any hospital, from the large metropolitan establishment to the small cottage unit.

Fibrinogen is not only simple both to apply and interpret – it can be readily used to screen large numbers of patients at risk, and involves minimum discomfort for patients during their immediate, and often difficult, post-operative period. The need for rapid, reliable diagnosis is crucial if the sequelae of deep vein thrombosis are to be avoided.

"There can now be no doubt about the importance of deep vein thrombosis and its sequelae"* And there can now be no doubt about the importance of fibrinogen in the control of this potentially fatal condition.

Iodinated (^{125}I) Human Fibrinogen Injection (IM.53P) for the early detection of post-operative deep vein thrombosis

Pipette, incubate, centrifuge, count and never touch a tube!

The 1008 sample Searle Analytic Radioassay System.

Searle Analytic (formerly Nuclear-Chicago) revolutionizes sample handling with its 1285 Automatic Gamma Counter, designed specifically for ^{125}I *Radioassay.*

Batch Processing Reduces Labor

Searle Analytic's patented programmable tray system lets you pipette, incubate, centrifuge, decant and count without touching a test tube. Color coded samples are never handled or removed from tray until you throw them away. Less prep time, less mess, less chance for error.

Four Times Faster

Searle Analytic's patented detector counts 3 tubes at once and changes samples faster. You'll count 100 morphine tests in triplicate in 20 minutes compared to 1¼ hours with a conventional counter. A full load of 1008 samples takes only about 3 hours and 10 minutes in the 1285... the equivalent of a conventional counter working for over 12 hours!

Reduced Computation Time

The 1285 with its programmable tray automatically senses RIA protocol, subtracts background, corrects for nonspecific binding, averages duplicate and triplicate samples, calculates unknown as % of standard, and sorts results into low, medium and high areas you determine. The PDS/3 data system, when linked to the 1285, plots optimum standard curve and provides dose levels in absolute units.

The Searle Analytic 1285 Radioassay System is backed by the world's largest team of nuclear instrument service men. Searle Analytic (formerly Nuclear-Chicago) is the world's most experienced manufacturer of automatic gamma counting equipment, with more systems in use than any other manufacturer.

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RIA reagent kits of exacting standards, developed by a leading university research center. All kits are ^{125}I-labelled, double antibody, utilizing a standard buffer from assay to assay. Protocols are matched to the system's performance and standards of the instruments below.

Automated pipetting station, allied to the RIA rack, assures hands off RIA all through the system... no individual tube handling, no massive micropipetting, no deviations in volume and dilution. Flexible through-put: handles small or large numbers of tubes with equal ease, all with reproducibility of 0.5% C.V. or better.

The RIA rack... heart of hands off, precise-reaction, total system RIA offered only by Micromedic Systems... samples prepared, incubated, centrifuged and counted, all in

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"The best

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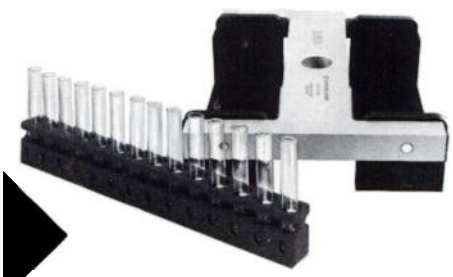
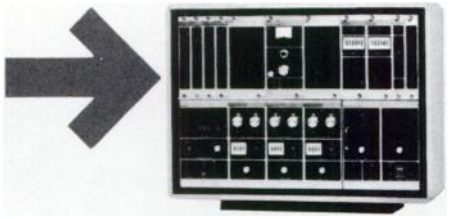


Incubation and separation. Incubation in air or water is achieved, again without tube-handling: samples remain securely in place in RIA rack. **Centrifugation** is speeded as well: rack fits popular refrigerated centrifuge heads. Centrifuged samples decanted directly from the rack with exclusive decanting clamp.



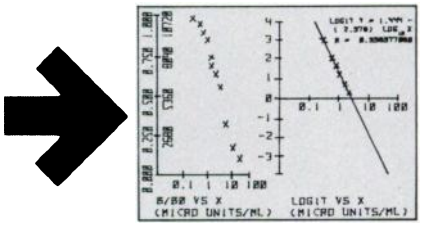
Automatic gamma counting system

uses standard RIA racks, completes error-free sequence of hands off RIA. The equivalent of three separate counting systems: each of 3 assay lots can be independently programmed, even for isotope selection. This economical time-sharing means multi-user access, permits sharing of capital cost.

Automatic mode may be interrupted for manual counting with no loss of index... greater assurance for your stats.

Data reduction

is straightforward: gamma counts are presented in standard Teletype™ form, adaptable through standard ASCII punched tape to any offline computer, such as the lab processor or central institutional processor. Rely on Micromedic Systems' extensive experience: let us recommend the data reduction process best suited to your individual needs.



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☐ I would like to know more about the RIA total system.

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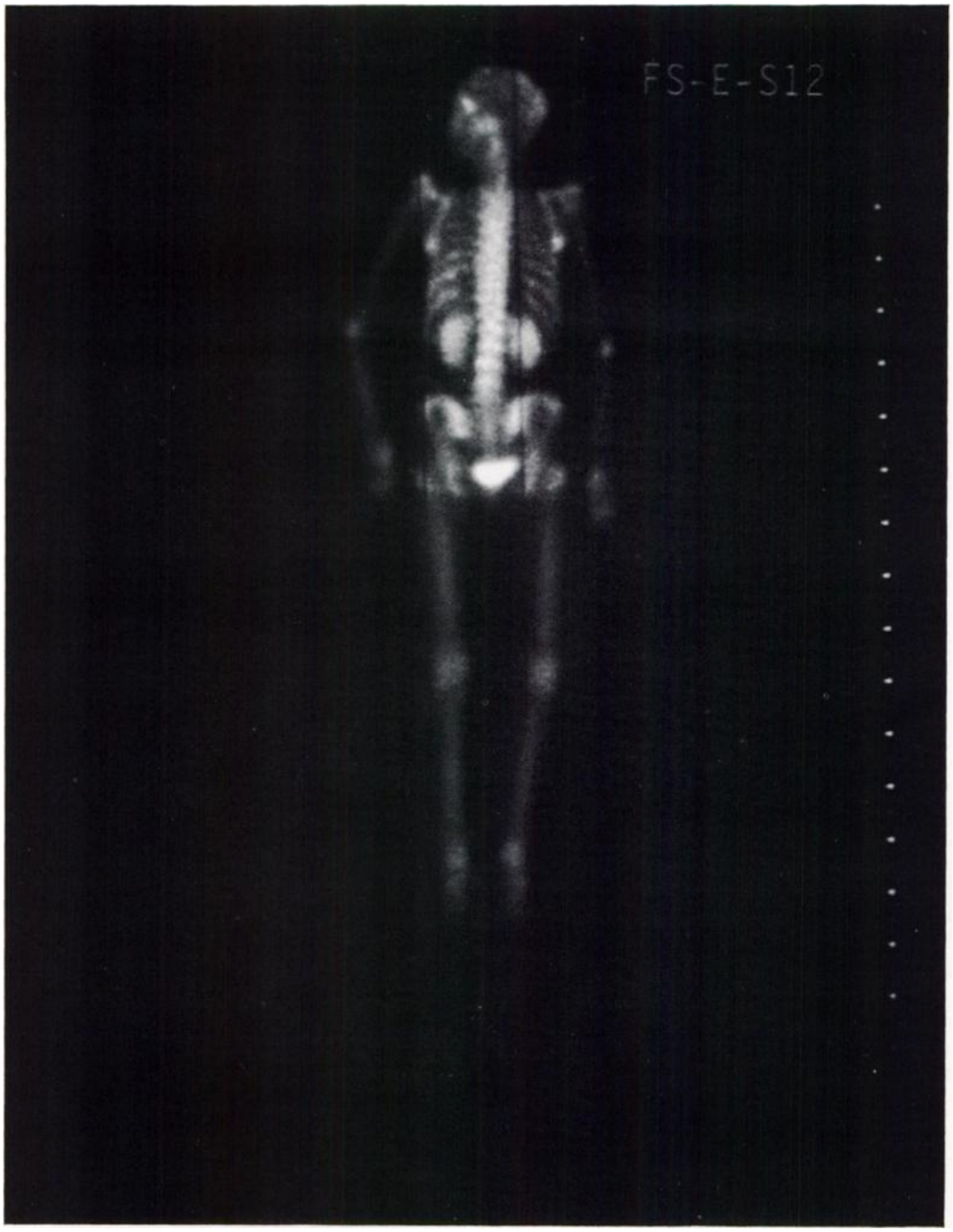

Searle Radiographics. We do more gamma imaging than anyone in the world.

We changed our name from Nuclear-Chicago to Searle Radiographics. We have also strengthened our organization so that we can offer more comprehensive service devoted to the field of diagnostic imaging. Our primary concern, however, remains unchanged. We want you to have the best possible equipment for this very vital procedure, because the patient is our ultimate concern as well as yours.

Saying that we do more gamma imaging than anyone in the world may sound boastful, but it happens to be true. Pho/Gamma is the instrument of choice in well over 70% of the hospitals and laboratories utilizing this type of diagnostic tool . . . and for very good reason: The importance of the procedure is only surpassed by the quality of the system. And the quality of our system is quite simply unsurpassed. Pho/Gamma and Searle Radiographics means gamma imaging. Need we say more?

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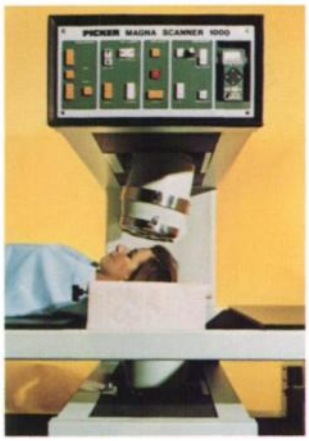
New Magna® Scanner 1000.

Not just another scanner.

You select a scanner primarily by the quality of scans it produces. Yet, flexibility and range of diagnostic information…ease of operation…reliability and ready service are important criteria, too.



All these advantages (and a few more) are brought together in the new Magna Scanner 1000. Picker's creative engineering team designed Magna Scanner 1000 right from the ground up. No effort was spared to make it the most advanced scanner available to the medical profession.

Many standard features are exclusive to Magna Scanner 1000. Fastest scanning speed (to 1000 cm/min)… widest choice of minifications (1:1 up to 1:10) for whole-body or single-organ procedures…automatic hotspot locator that finds (and remembers) hotspot location…a sliding-average computer (statistically smoothes out image input data)…and collimation specifically designed for 99mTc labeled phosphate compounds for skeletal imaging.

Other advantages you've come to expect from the scanner leader are present in great abundance in Picker's Magna Scanner 1000. Large (24 x 75") field, big enough for 97½% of all skeletal surveys…pushbutton control of scan parameters unique to each organ…push-button calibration that assures constant film density (patient-to-patient, week-to-week).

Magna Scanner 1000 is the total performance whole-body scanner. And it's backed for maximum in-use availability by Picker's worldwide technical service organization. Picker Corporation, 595 Miner Road, Cleveland, Ohio 44143.

Another reason to buy from...

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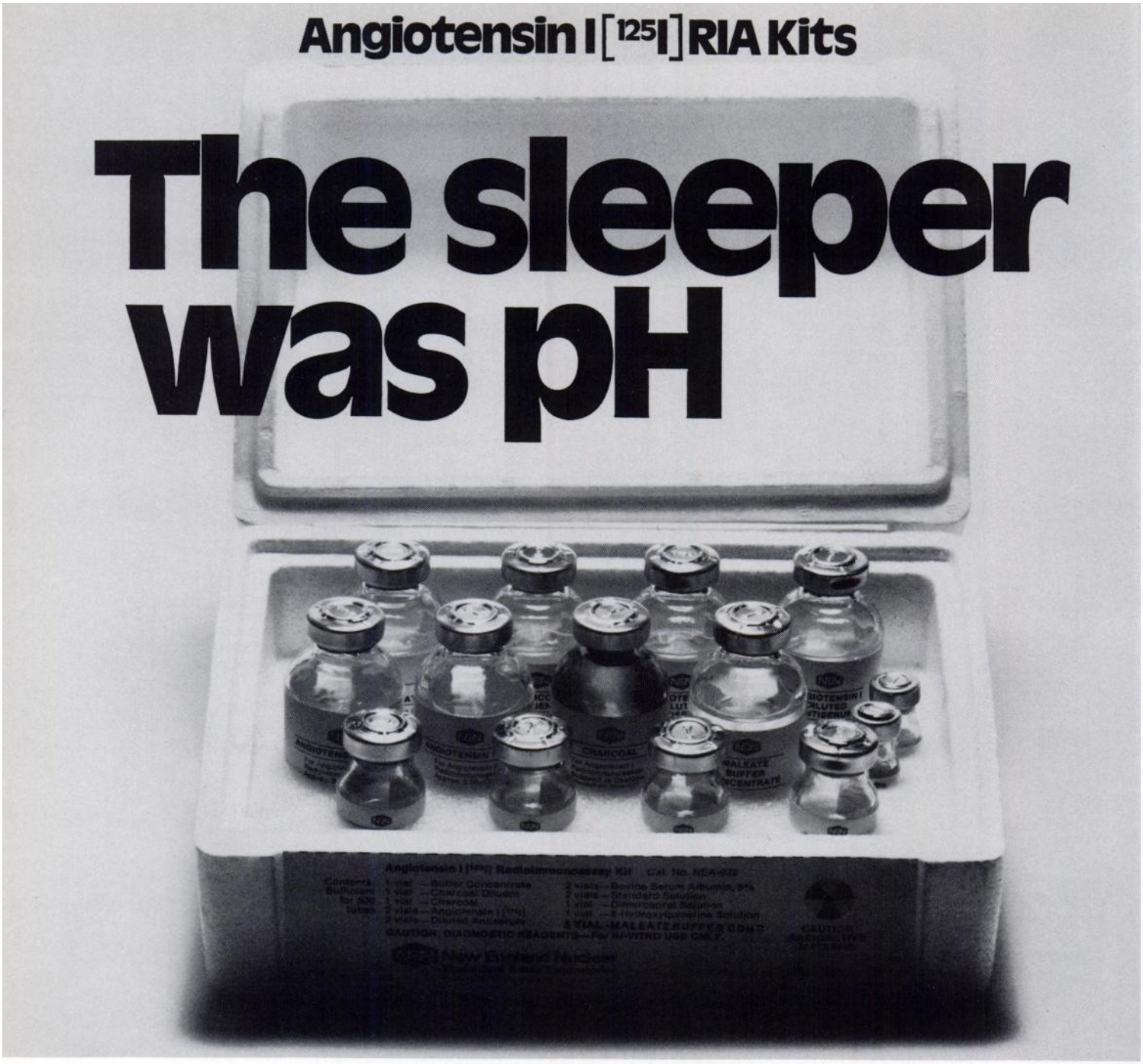
ONE OF THE C.I.T. COMPANIES

Angiotensin I [^{125}I] RIA Kits

The sleeper was pH



A pH optimum of 5.5-6.0 is necessary for optimal generation of Angiotensin I, to achieve the ultimate sensitivity in patient screening.[1,2,3,4]

To this day, NEN's Angiotensin I [^{125}I] RIA Kit is the only commercially available kit to include optimal generation conditions, with a pH of 6.0 for one hour. Consistently high correlations with bioassay have been the result.

[1]Cf. Sealy, J.E., J. Gerten-Banes, and J.H. Laragh, Kidney International, *1*, 240-253 (1972). [2]McDonald, J.M. and G.A. Fischer, Am. J. Clin. Path., *59*, 6, 858 (1973). [3]Bagni, B., *et al*, Brit. Med. J., Sept. 9, 1972, page 676. [4]Abe, K., *et al*, Jap. Circ. J. (Eng. Summary), *36*, 697 (1972).

Gentlemen: Please send me complete technical information on your Angiotensin I[^{125}I] RIA kit.

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Multi-imager system for

The complete sequence imaging system with built in physiological trigger functions.

study: Tc 99m pertechnetate renal flow
exposure: 0.8 seconds frame
mode: 16 frame dynamic recorded on sheet of 11" x 14" X-ray film

 # MATRIX INSTRUMENTS, INC.

scintillation cameras.

- **Up to 36 frames of dynamic flow study recorded on 11″ x 14″ X-ray film**
- **Physiological trigger options permitting imaging of predetermined multiple phases of the respiratory or cardiac cycles in separate frames.**
- **Electronic frame advance without any moving mechanical components.**
- **Electronic frame advance dead time of less than 1/1,000th of a second.**
- **Variable automatic exposure time per frame of 0.1 second to 10 minutes.**
- **Compatible with all scintillation cameras.**

Introduction

The Multi-Imager System is designed for use with scintillation cameras to provide dynamic flow, static, and physiological function synchronized studies. The system operates by altering the CRT deflection signals, changing the size, location, and duration of the image on the display scope. Frame advance is achieved electronically, yielding sequential exposures with essentially no data loss.

Dynamic flow study applications

The Multi-Imager System allows selection of 4, 16, or 36 frame format dynamic flow studies. The three formats vary in the size of the image being recorded and the maximum number of available frames:

frame format	maximum number of frames	frame size 11″ x 14″ X-ray film
4	4	3.5″ diameter
16	16	2.0″ diameter
36	36	1.3″ diameter

The exposure time per frame is adjustable from 0.1 second to 10 minutes. The frame advance dead time of the system is less than 1/1,000th of a second. A remote foot operated start switch is also available.

Static study applications

A one frame format allows recording of a life size 10″ diameter image on 11″ x 14″ X-ray film. In addition, the dynamic flow study frame formats can be operated manually, advancing the frame after each view is recorded. In the 4 frame format four static views can be recorded on a single sheet of 11″ x 14″ X-ray film, each view image having a diameter of 3.5″. In the 16 frame format a sixteen view bone study can be recorded on a single sheet of 11″ x 14″ X-ray film, each view image in the correct anatomical orientation, with a diameter of 2.0″.

Physiological trigger accessories

Unlike a motorized camera, the Multi-Imager System can not only advance frames, but also return to re-expose frames. Physiological trigger accessories are available that allow synchronization of recorded data with the patient's cardiac or respiratory cycle. The cardiac function system records the systolic image data in one frame and the diastolic image data in a second frame, alternating exposures between the two frames synchronous with the patient's cardiac cycle. The respiratory function system is useful to minimize respiration motion artifacts in liver and lung studies. Through use of a chest expansion transducer, one frame records the inspiration plateau image data, the second frame records the expiration plateau image data, and the third frame records the image data between the two plateaus. The exposures are cycled through the three frames synchronous with the patient's respiratory cycle. With both physiological trigger accessories, all the available image data is recorded, separated into frames corresponding to phases of the cardiac or respiratory cycle.

Photographic recording options

An 11″ x 14″ format X-ray film camera and a 4″ x 5″ format scope camera are available for use with the Multi-Imager System.

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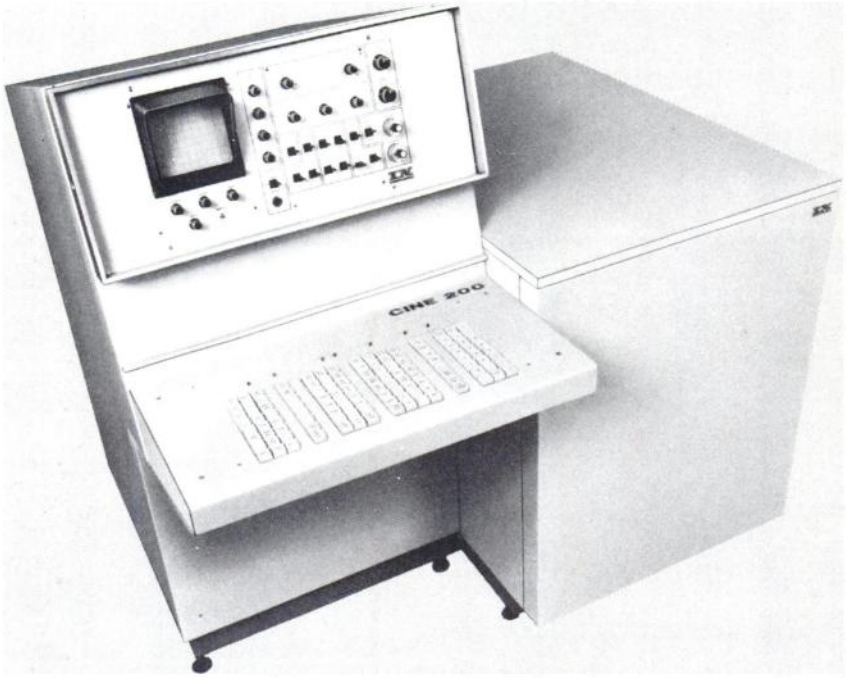

CINE 200.

And CINE 200 means even more. Simultaneous acquisition from two imaging devices. Clinically useful routines. Human engineering. And prices that put these capabilities within the range of your budget.

There's more to the capability story of the CINE 200. Find out all the details of why it is one of the most versatile image-data processors ever developed – for cameras and scanners. CINE 200 from Intertechnique is sold and serviced in the U.S. exclusively by Raytheon Company. For information, contact Raytheon Company, Medical Electronics, 40 Second Avenue, Waltham, Mass. 02154 (617) 890-3240.

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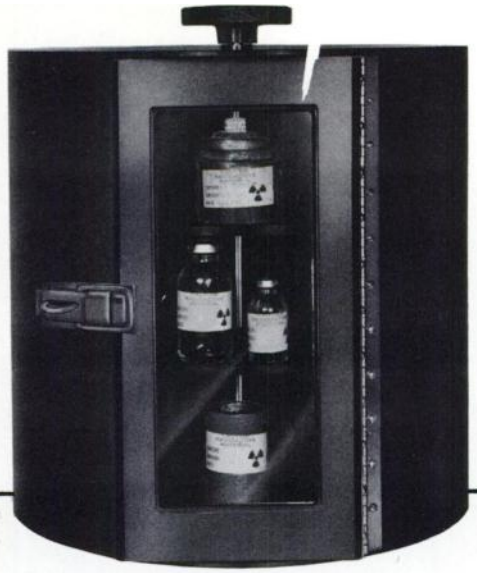
Unique GAMMA VUE® see-through shields

let you store, view and dispense radioactive materials with complete safety



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- Viewing window and rotating shelves permit the rapid location and removal of contents with minimal radiation exposure to personnel.
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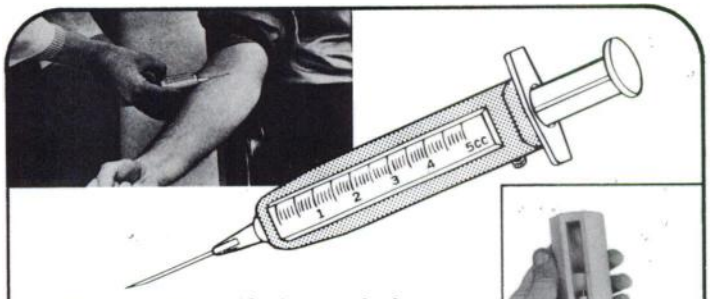
- Inner lead lining is sufficient to shield ^{99m}Tc, ^{87}Sr, ^{131}I and other commonly-used radionuclides.



Thin-wall, lightweight

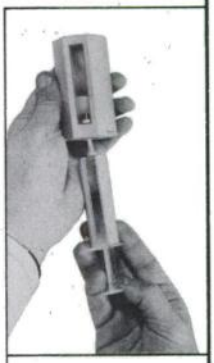
SYRINGE SHIELD*

for Technetium-99m

or any gamma emitter <140 keV

- 30% lighter than regular syringe shields. More comfortable and easier to use.
- Reduces ^{99m}Tc exposure by a factor of 200.
- Accepts standard disposable syringes in 2½ to 3cc and 5 to 6cc sizes.

*U.S. Patent 3,596,659



VIAL SHIELD**

For ^{99m}Tc-Sulphur Colloid Preparation

- Permits heating and drawing of ^{99m}Tc-S colloid preparations (and similar solutions) without radiation exposure to technicians.
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**U.S. Patent 3,673,411

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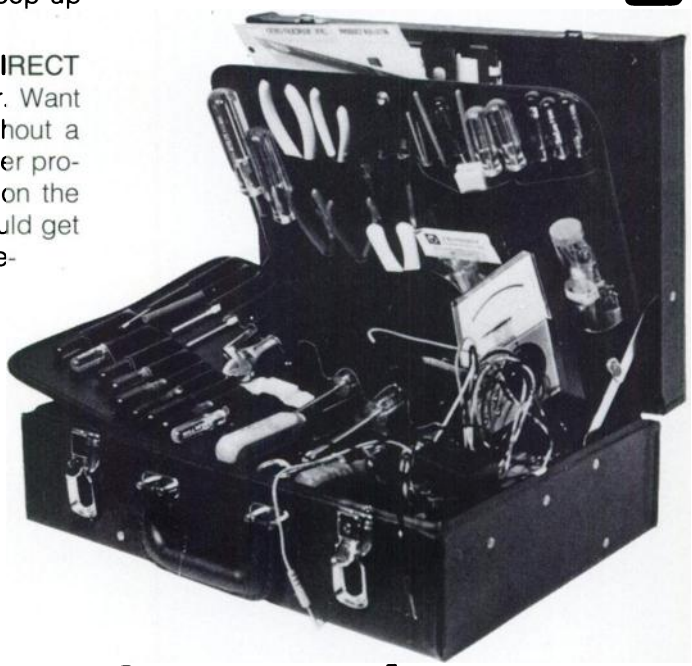

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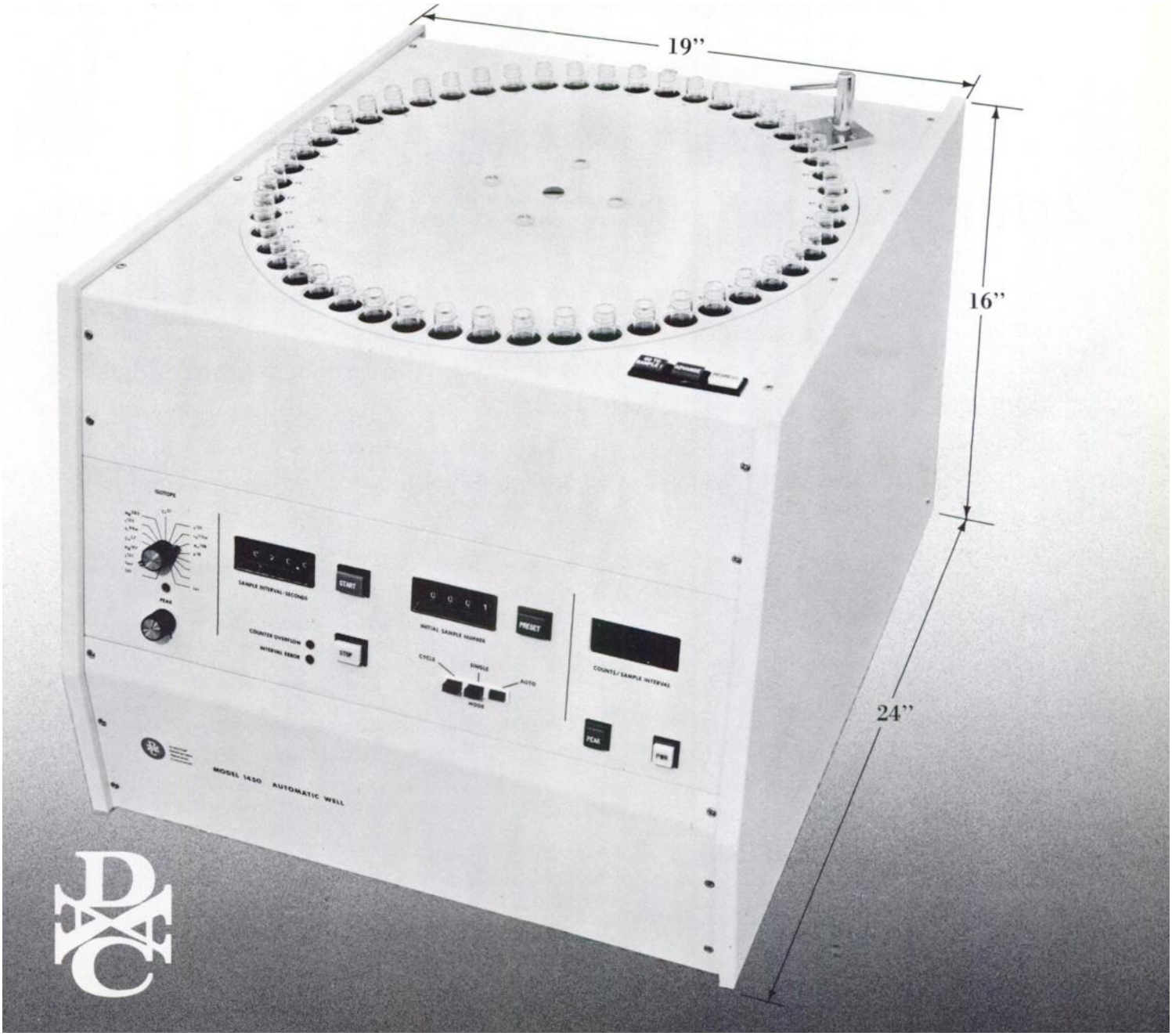

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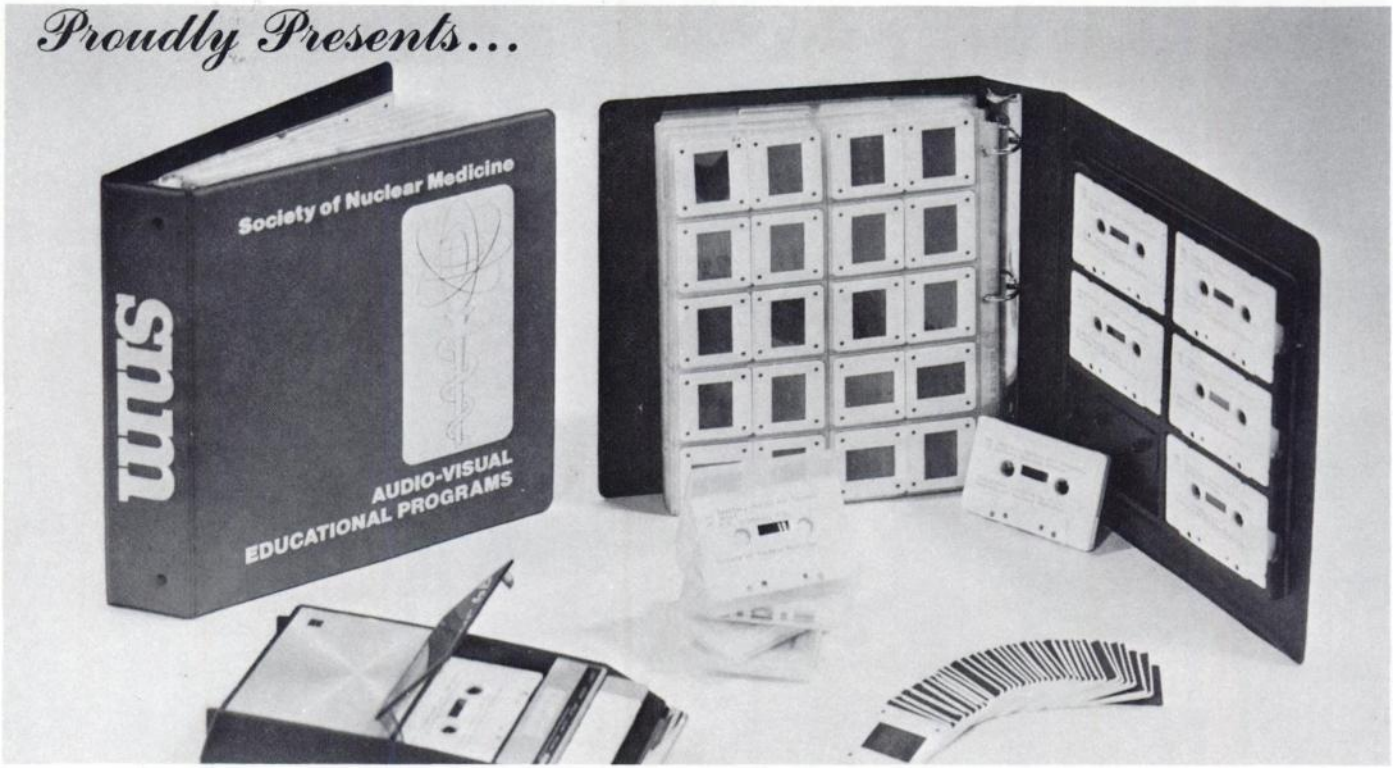

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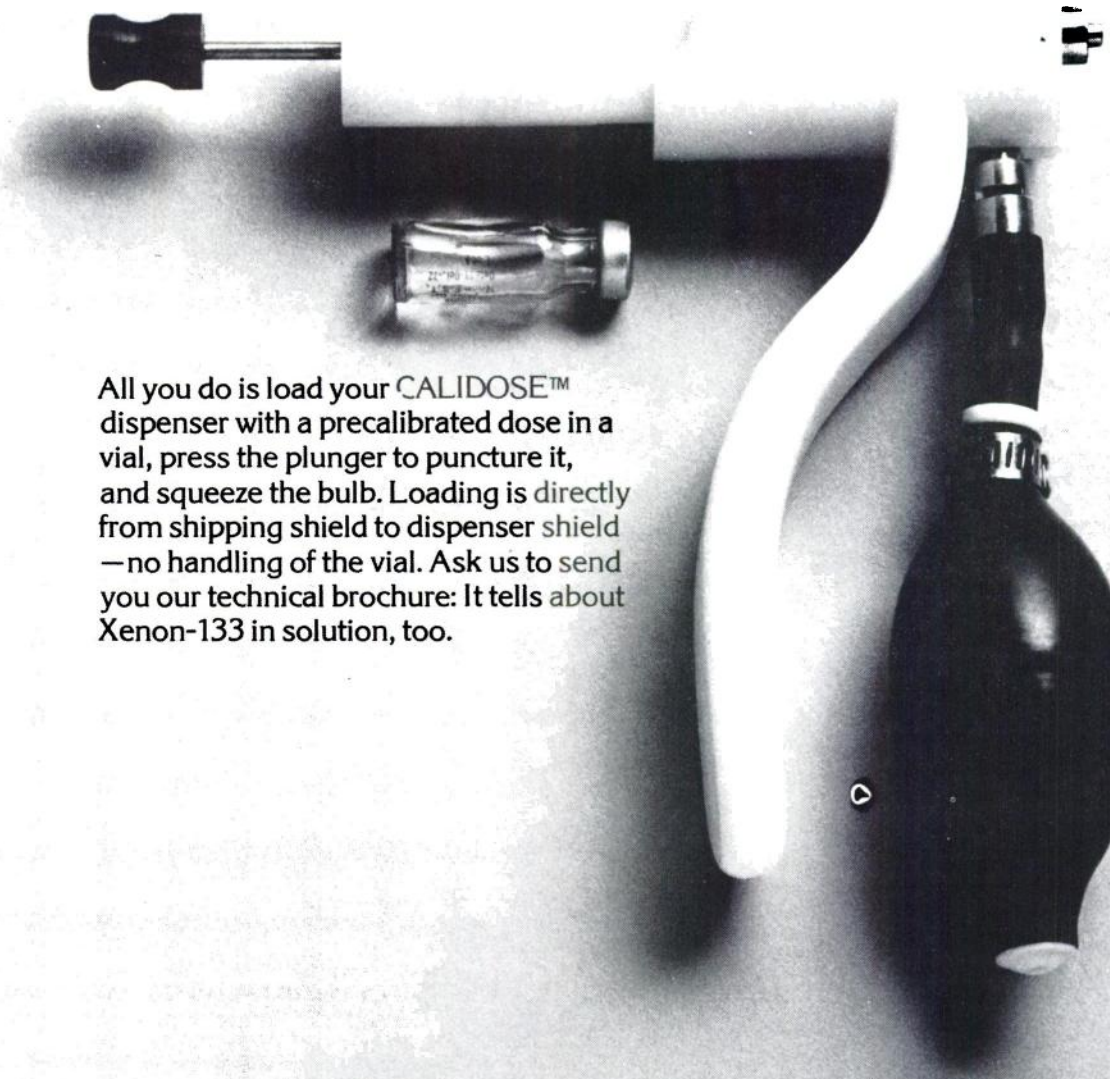

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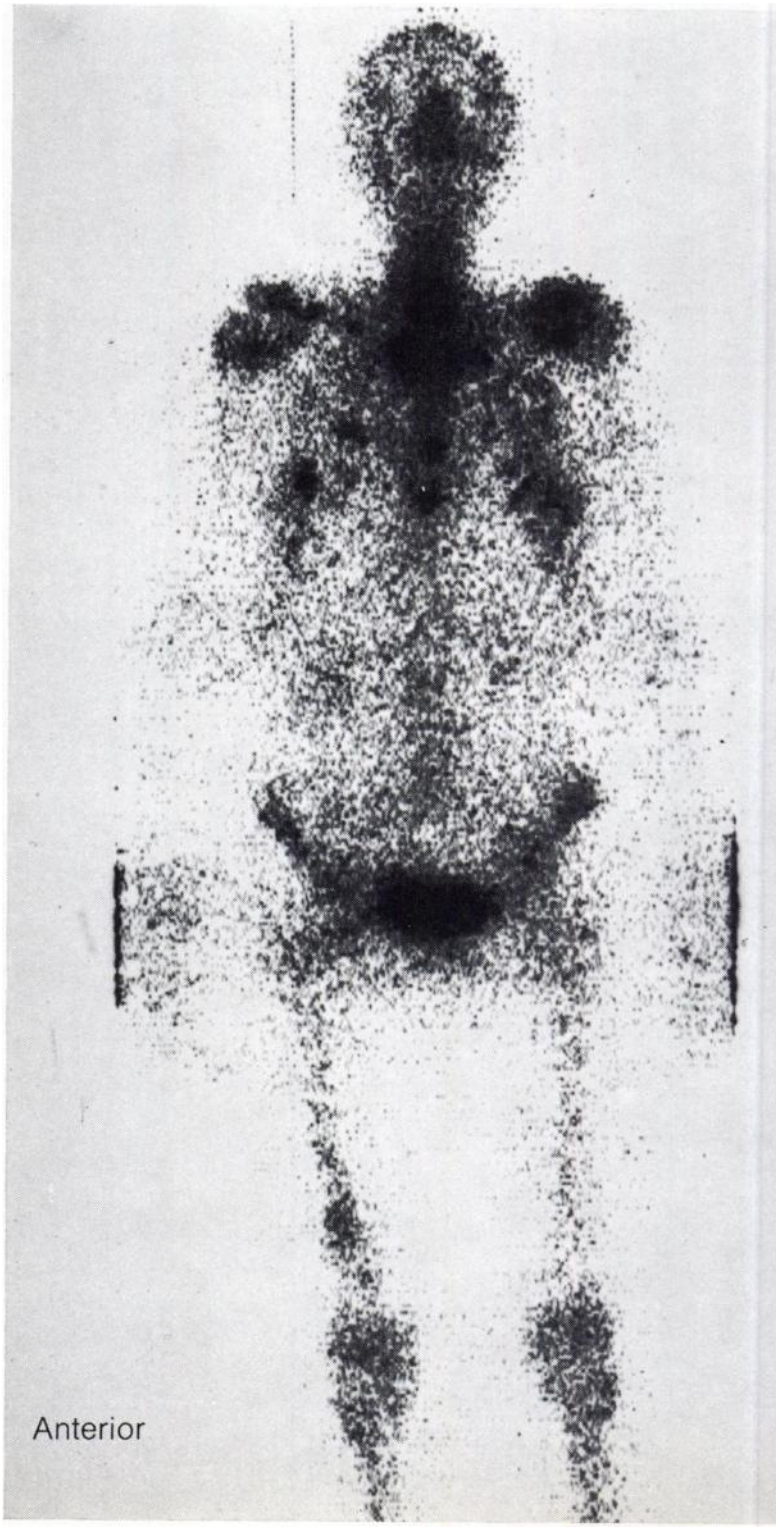

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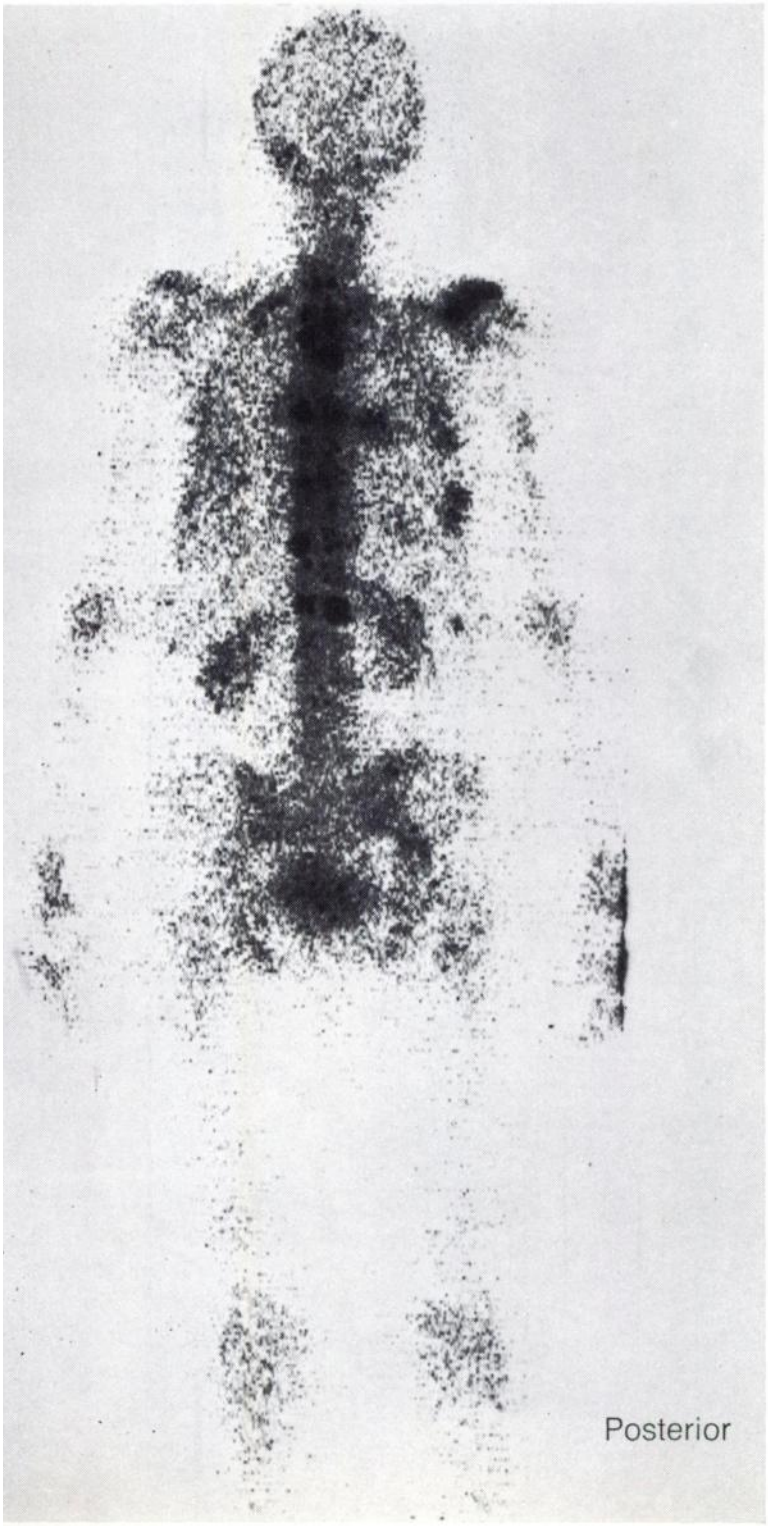
(5.9 MG DISODIUM ETIDRONATE 0.16 MG STANNOUS CHLORIDE)

SKELETAL IMAGING AGENT



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OSTEOSCAN

(5.9 MG DISODIUM ETIDRONATE 0.16 MG STANNOUS CHLORIDE)

SKELETAL IMAGING AGENT

DESCRIPTION

Each vial of OSTEOSCAN contains 5.9 mg disodium etidronate and 0.16 mg stannous chloride as active ingredients. Upon addition of ADDITIVE-FREE ^{99m}Tc-pertechnetate, these ingredients combine with ^{99m}Tc to form a stable soluble complex.

ACTIONS (CLINICAL PHARMACOLOGY)

When injected intravenously, ^{99m}Tc-labeled OSTEOSCAN has a specific affinity for areas of altered osteogenesis. Areas of bone which are undergoing neoplastic invasion often have an unusually high turnover rate which may be imaged with ^{99m}Tc-labeled OSTEOSCAN. Three hours after intravenous injection of 1 ml ^{99m}Tc-labeled OSTEOSCAN, an estimated 40-50% of the injected dose has been taken up by the skeleton. At this time approximately 50% has been excreted in the urine and 6% remains in the blood. A small amount is retained by the soft tissue. The level of ^{99m}Tc-labeled OSTEOSCAN excreted in the feces is below the level detectable by routine laboratory techniques.

INDICATIONS

OSTEOSCAN is a skeletal imaging agent used to demonstrate areas of altered osteogenesis.

CONTRAINDICATIONS

None.

WARNINGS

This radiopharmaceutical should not be administered to patients who are pregnant or lactating unless the information to be gained outweighs the potential hazards.

Ideally, examinations using radiopharmaceuticals, especially those elective in nature, of a woman of childbearing capability should be performed during the first few (approximately 10) days following the onset of menses.

Radiopharmaceuticals should be used only by physicians who are qualified by specific training in the safe use and handling of radionuclides produced by nuclear reactor or particle accelerator and whose experience and training have been approved by the appropriate government agency authorized to license the use of radionuclides.

The ^{99m}Tc-generator should be tested routinely for molybdenum breakthrough and aluminum. If either is detected, the eluate should not be used.

PRECAUTIONS

Both prior to and following ^{99m}Tc-labeled OSTEOSCAN administration, patients should be encouraged to drink fluids. Patients should void as often as possible after the ^{99m}Tc-labeled OSTEOSCAN injection to minimize background interference from accumulation in the bladder and unnecessary exposure to radiation.

As in the use of any other radioactive material, care should be taken to insure minimum radiation exposure to the patient, consistent with proper patient management, and to insure minimum radiation exposure to occupational workers.

ADVERSE REACTIONS

None.

DOSAGE AND ADMINISTRATION

The recommended adult dose of ^{99m}Tc-labeled OSTEOSCAN is 1 ml with a total activity range of 10-15 mCi. ^{99m}Tc-labeled OSTEOSCAN should be given intravenously by slow injection over a period of 30 seconds within three (3) hours after its preparation. Optimum scanning time is 3-4 hours postinjection.

The patient dose should be measured by a suitable radioactivity calibration system immediately prior to administration.

PHYSICAL CHARACTERISTICS

Technetium-99m decays by isomeric transition with a physical half-life of 6 hours[1]. Photons that are useful for imaging studies are listed in Table 1.

Table I. Principal Radiation Emission Data

Radiation	Mean % / Disintegration	Mean Energy (keV)
M int. con. electron, γ-1	98.6	1.7
Gamma-2	88.3	140.5
K int. con. electron, γ-2	8.8	119.5
L int. con. electron, γ-2	1.1	137.7
Gamma-3	0.03	142.7
K int. con. electron, γ-3	0.96	121.7
Kα X-rays	6.5	18.4

[1]Dillman, L.T., Radionuclide Decay Schemes and Nuclear Parameters for Use in Radiation-Dose Estimation, Supplement No. 2, MIRD pamphlet No. 4, *J. Nucl. Med.*, p.22, 1969.

The specific gamma ray constant for ^{99m}Tc is 0.72 R/mCi-hr at 1 cm. The half-value layer is 4 mm of Pb.

To correct for physical decay of this radionuclide, the fractions that remain at selected intervals after the time of calibration are shown in Table II.

Table II. Physical Decay Chart; ^{99m}Tc, half-life 6 hours

Hours	Fraction Remaining	Hours	Fraction Remaining
–5	1.779	5	.562
–4	1.587	6	.500
–3	1.414	7	.446
–2	1.260	8	.397
–1	1.122	9	.354
0*	1.000	10	.315
1	.891	11	.281
2	.794	12	.250
3	.707	18	.125
4	.630	24	.063

*Calibration time

RADIATION DOSIMETRY

The estimated absorbed radiation doses[1] to an average patient (70 kg) from an intravenous injection of a maximum dose of 15 millicuries of ^{99m}Tc-labeled OSTEOSCAN are shown in Table III. For comparison, the estimated radiation doses from a maximum dose of 4 millicuries of ^{18}F used as a bone imaging agent are also included.

Table III. Radiation Doses

Tissues	Absorbed Radiation Dose	
	^{99m}Tc-OSTEOSCAN (rads/15 mCi)	^{18}F (rads/4 mCi)
Skeleton*	0.59	0.64
Testes	0.32	0.83
Ovaries	0.33	0.85
Total Body	0.13	0.18
Bladder		
4.8 hour void	8.4	
Bone Marrow	0.14	

*Local dose may be a factor of 10 or more greater.

[1]Method of Calculation: A Scheme for Absorbed-Dose Calculations for Biologically Distributed Radionuclides, Supplement No. 1. MIRD pamphlet No.1, *J. Nucl. Med.*, p.7, 1968.

HOW SUPPLIED

The OSTEOSCAN kit contains five (5) vials. Each vial contains 5.9 mg disodium etidronate and 0.16 mg stannous chloride as active ingredients. The contents of each vial are prepared by appropriate manufacturing procedures to be sterile and pyrogen-free.

PREPARATION FOR USE

The following aseptic procedure should be followed in the preparation of the ^{99m}Tc-labeled OSTEOSCAN skeletal imaging agent:

STEP 1.

Remove central metal disc of the OSTEOSCAN vial and swab the top of the vial with alcohol to sterilize the surface of the closure.

STEP 2.

Place the OSTEOSCAN vial in a radiation shield. In a sterile syringe, collect 5 ml of sterile pyrogen-free ^{99m}Tc-pertechnetate from an additive-free ^{99m}Tc-pertechnetate source which has been checked for molybdenum breakthrough. Check the activity of the ^{99m}Tc-pertechnetate to avoid exceeding 50-75 mCi/5 ml. If the activity exceeds this level, dilute with ADDITIVE-FREE sterile saline only such that a 5 ml portion will contain the 50-75 mCi activity.

STEP 3.

Add the ^{99m}Tc-pertechnetate to the vial. After adding the ^{99m}Tc-pertechnetate to the vial, withdraw an equivalent amount of air to equalize the pressure inside the vial to prevent spray contamination. CAUTION: DO NOT USE ^{99m}Tc-PERTECHNETATE WHICH CONTAINS AN OXIDIZING AGENT. INTRODUCTION OF AN OXIDANT MAY RESULT IN A SOLUTION UNSUITABLE FOR SKELETAL IMAGING. Commercial sources of ^{99m}Tc-pertechnetate that have been used in clinical trials with OSTEOSCAN include the New England Nuclear Technetium-99m Generator, the Mallinckrodt Technetium-99m Generator, the Squibb Hi-Con Generator, Medi+Physics Instant Technetium, and Cambridge Nuclear Instant Technetium.

STEP 4.

Shake the vial well for three (3) minutes to assure complete dissolution of the contents. Minimal exposure can be obtained by use of either an ultrasonic agitator or mechanical shaker.

STEP 5.

Record the time and date of preparation and the activity of the ^{99m}Tc-labeled OSTEOSCAN on the radiation shield label contained in the kit and affix this label to the shield.

STEP 6.

Use within three (3) hours of preparation. Discard excess material.

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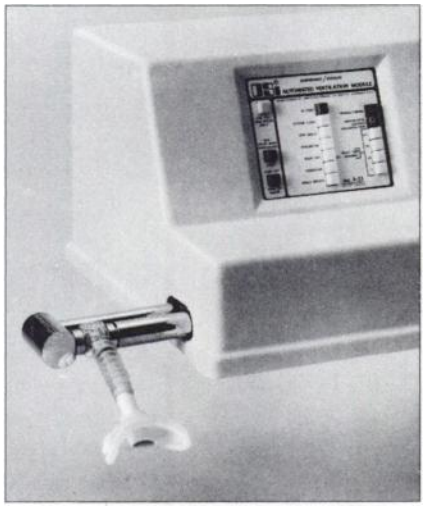

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PHYSICIAN, CHIEF RESIDENT IN Nuclear Medicine in university medical center. Available July 1974. Experimental and clinical research experience. Desires full-time clinical position, preferably in department with research potential. Reply Box 103, S.N.M., 305 East 45th Street, New York, N.Y. 10017.

CENTRAL CHAPTER

THE SOCIETY OF NUCLEAR MEDICINE

Annual Spring Meeting

March 23–24, 1974 Chicago, Illinois

Sheraton O'Hare Motor Hotel

The Central Chapter of the Society of Nuclear Medicine will sponsor a 2-day symposium on "The Lung" on Saturday and Sunday, March 23 and 24, 1974, at the Sheraton O'Hare Motor Hotel, 6810 N. Manheim Road, Rosemont, Illinois 60018 (10 minutes by limousine from the airport). Invited and selected papers will cover the clinical application of established and investigative techniques in pulmonary disease diagnosis including pulmonary embolism, obstructive lung diseases, and lung imaging in the pediatric patient.

For further information please contact:

Bryan R. Westerman, Ph.D., Department of Nuclear Medicine, Northwestern Memorial Hospital, Fairbank and Superior Streets, Chicago, Illinois 60611. Telephone (312) 649-3000.

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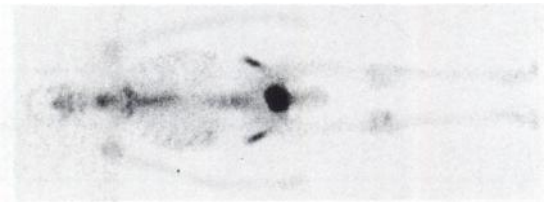

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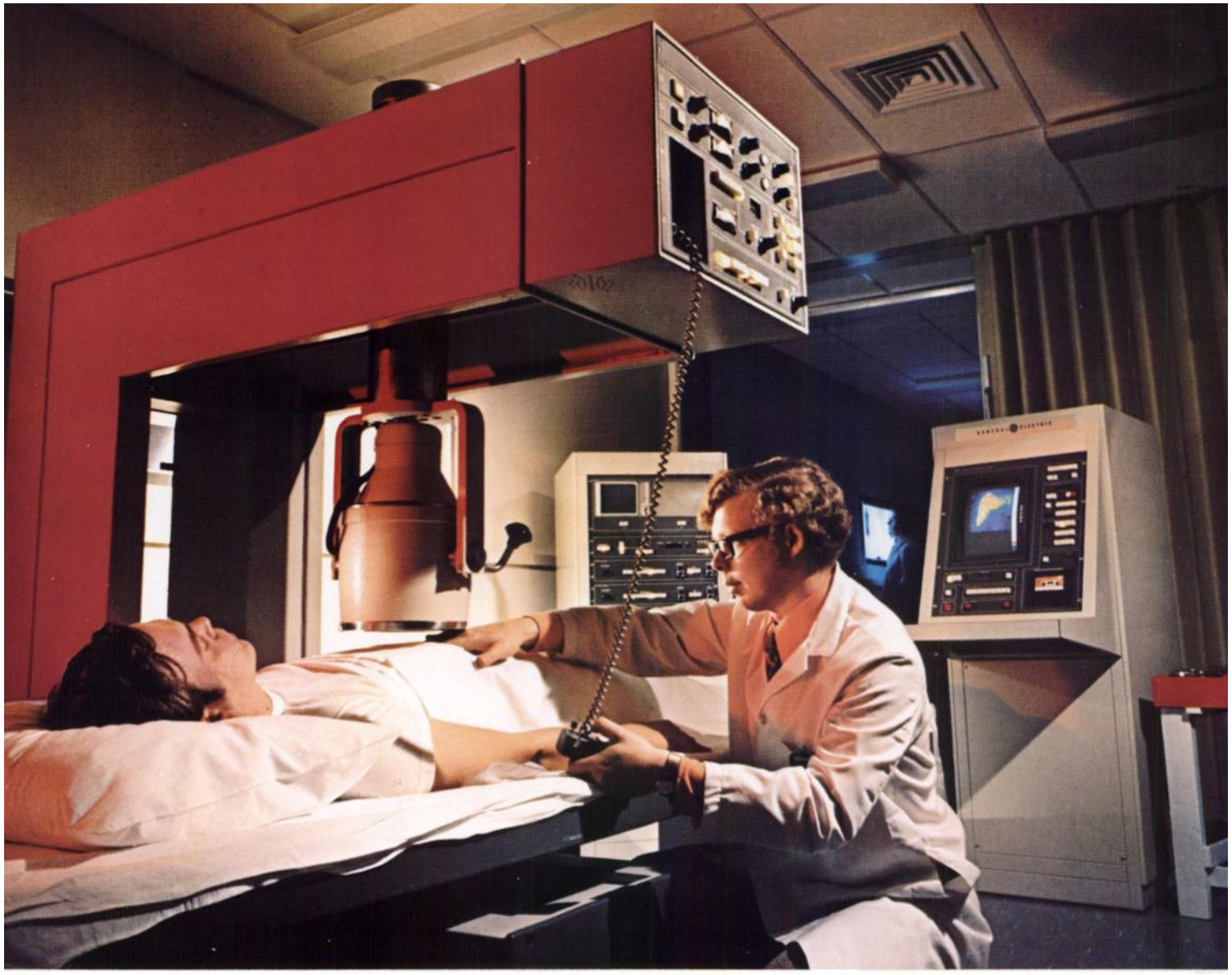

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To view and quantify patient count information in black and white or fully functional color, Maxiscan can be combined with GE's Videodisplay and Processing Unit. Images are displayed on a video monitor; count data is stored in the unit's electronic memory, and can be manipulated to enhance desired details and to aid interpretation and diagnosis. Enhanced VDP data may be played back to Maxiscan and recorded on 14 x 17 inch film. Scans can also be recorded on cassette tape for off-line playback and teaching purposes. Count information, obtained from any scanner or camera, can be transmitted from one VDP to another over regular telephone lines.

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Here's the information hospitals are getting with Maxiscan...

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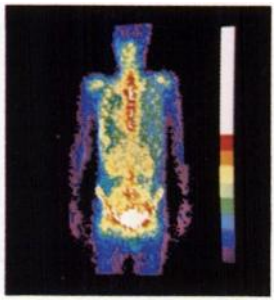
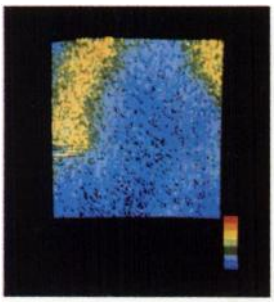
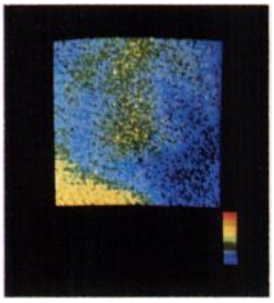


These three images, from a single whole body scan, demonstrate how manipulation of data stored in the VDP electronic memory can enhance desired details and aid diagnosis. The isotope used was ^{99m}Tc Polyphosphate. At left, an anterior view displays raw, unmanipulated data from the memory. At right, smoothed data is shown with a Y axis electronic slice through the area of suspicion. The count profile superimposed over this image and shown separately, center, confirms greater uptake on the right side. The photorecorded image showed only a suspicion of greater isotope uptake.





In a case of suspected pericardial effusion, a transmission scan (left) of the chest was obtained using an Iodine 131 source. An emission scan (center) of the same region was simultaneously obtained with the same probe, 15 minutes after an intravenous injection of ^{99m}Tc labeled albumin. The heart and liver are outlined. Note how the intracardiac activity (central area of center scan) fails to fill the large mediastinal shadow (central blue area of left scan). This discrepancy, between heart size and that of the mediastinum, is more easily seen when these two scans are superimposed (right); a technic easily accomplished on the VDP. The resulting diagnosis, a large pericardial effusion which appears to be predominantly left-sided, was confirmed by the aspiration of 1800 ml. of fluid from an encysted pericardial effusion.

Scans courtesy of Dr. M. J. Chamberlain, University Hospital, London, Ontario.

General Electric Medical Systems, Milwaukee and Toronto.
In Europe, Elscint GmbH, Wiesbaden; Elscint France SARL, Buc.

GENERAL ELECTRIC

THE AMERICAN COLLEGE OF NUCLEAR MEDICINE
(Incorporated April 1971)

ANNOUNCES

(1) The Charter Membership Meeting was held in Chicago, Illinois, on October 20–21, 1973, and delegates from the 50 states were elected from the membership, now in excess of 800. Speakers included representatives from the A.M.A. and the A.E.C.

(2) Charter Membership was extended until April, 1974. Final acceptance of the Provisional Constitution, Bylaws, and Code of Ethics will be made at the interim business meeting to be held in Denver, Colorado, in April, 1974, to allow new members to participate in final formulation and ratification.

(3) Thirty-eight Fellows were nominated and elected. The Fellowship list includes seven past presidents of the Society of Nuclear Medicine. All Fellows elected have in excess of 21 years each in the practice of nuclear medicine, and are, in effect, all nuclear medicine pioneers.

(4) More than 90 per cent of the members have Board Certification by an approved American Medical Specialty Board, and over 130 members hold conjoint A.B.N.M. Board Certification in addition to another major Board.

(5) The Charter Membership approved a Bylaws amendment permitting waiver of county society membership in certain cases upon the recommendation of the Credentials Committee, as, for example, members of the Uniformed Services.

(6) Practitioners in nuclear medicine may obtain application blanks and additional information regarding membership qualifications by writing to:

ROBERT C. GARCIA, M.D.
Chairman, Credentials Committee
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Ah, but what did we leave out? Functionally, nothing. We simply designed out the older technology, both electronic and mechanical, that tends to weigh more and bulk larger. And the newer technology, with its lesser weight and size, is often more reliable. And *that's* a nice bonus.

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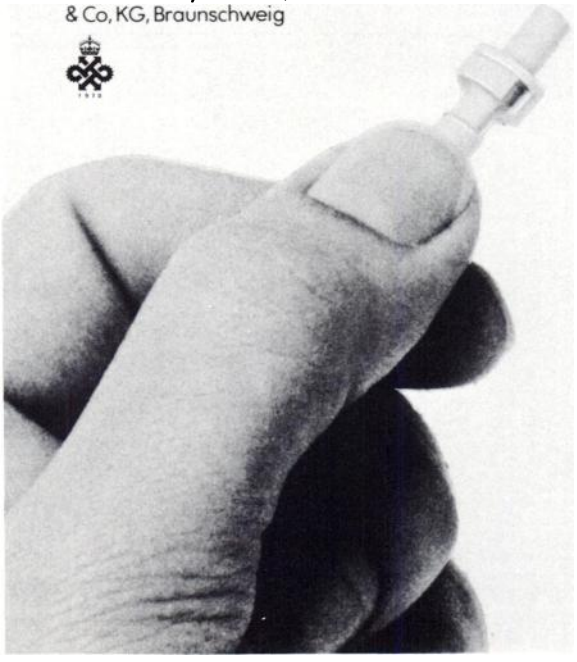

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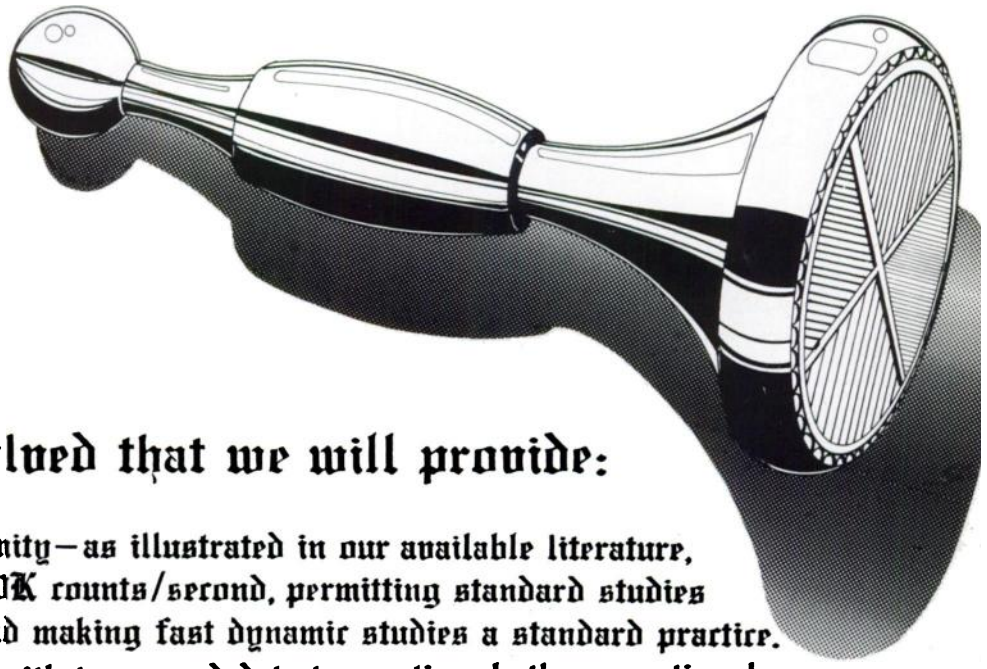

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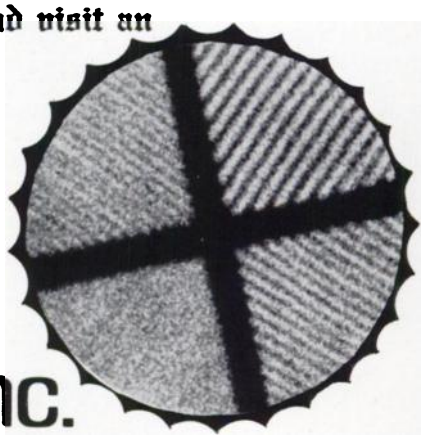

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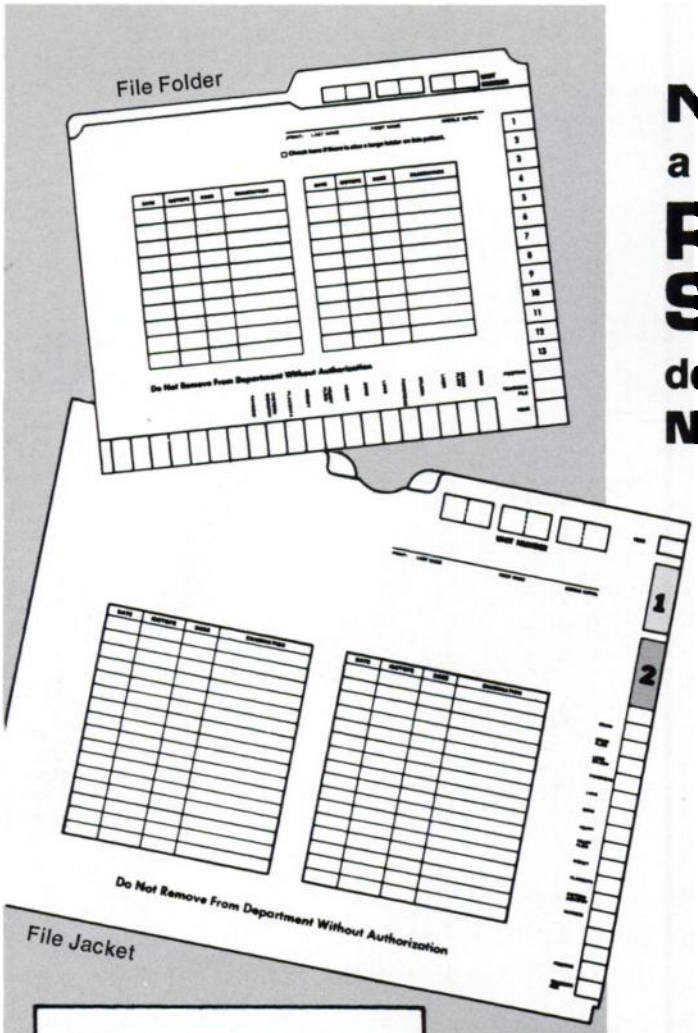

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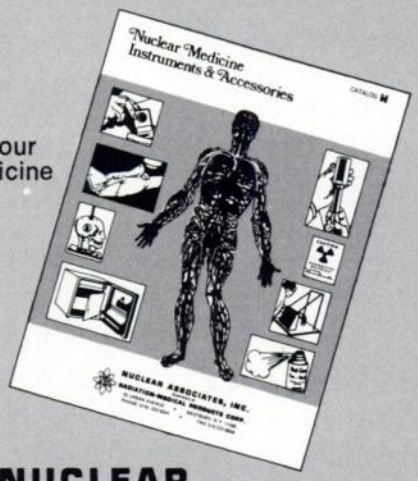

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For further literature and references, write us. Schwarz/Mann, Division of Becton, Dickinson and Company BD Mountain View Avenue, Orangeburg, N.Y. 10962.

(1) Kotchen et al; J. Clin. Endocr. and Metab. 36, 5, 804 (1973)

(2) Sealy et al; Kidney International 1:240 (1972)

(3) Cohen et al; J. Lab. Clin. Med. 77:1025 (1971)

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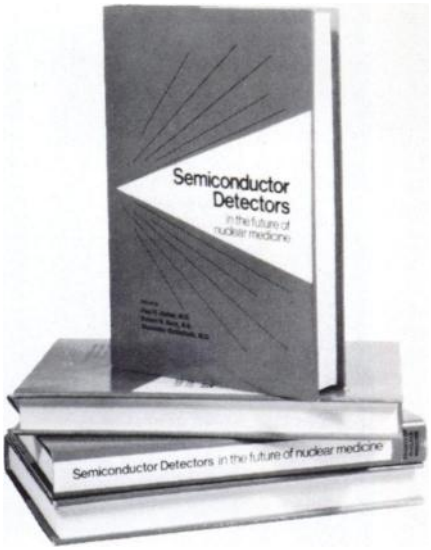

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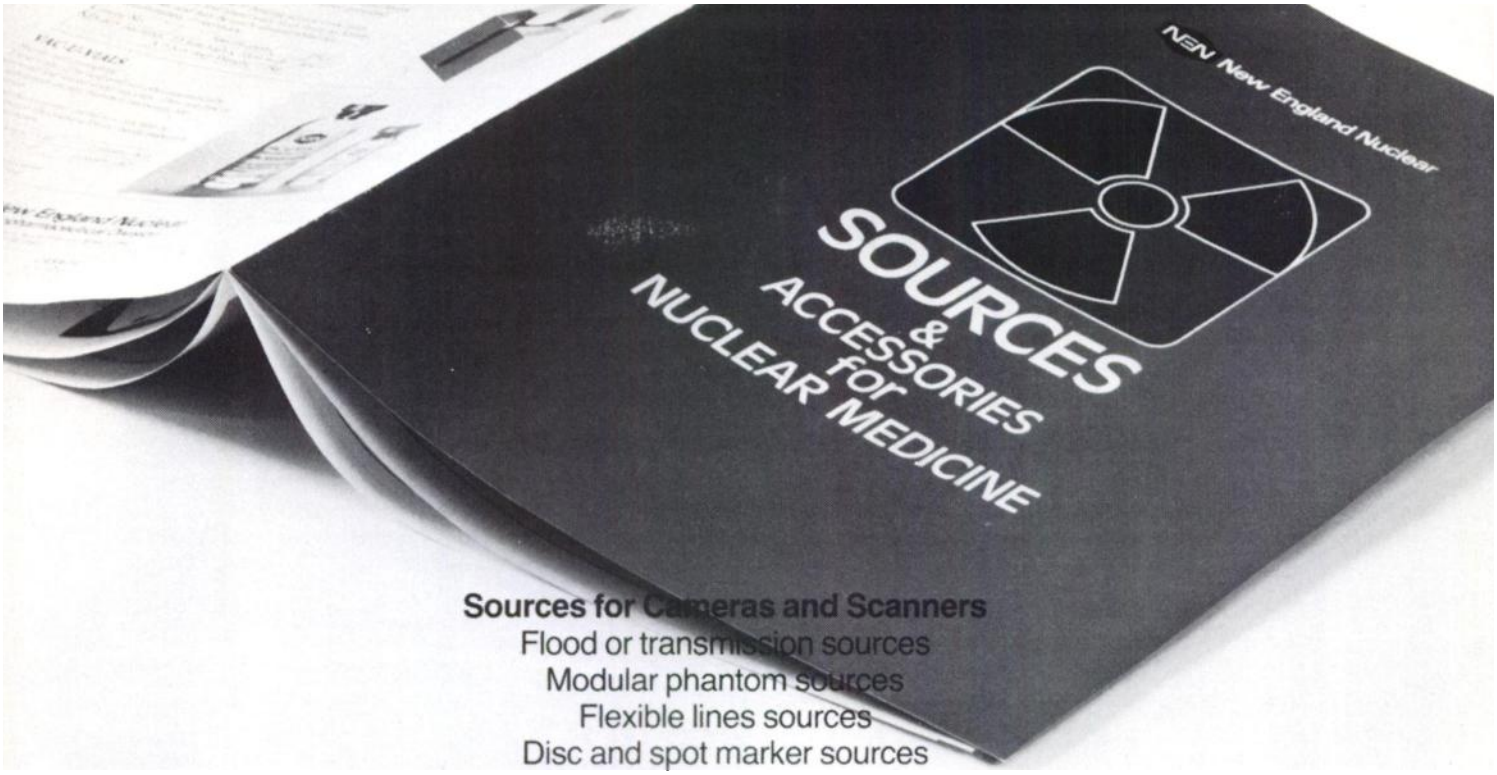

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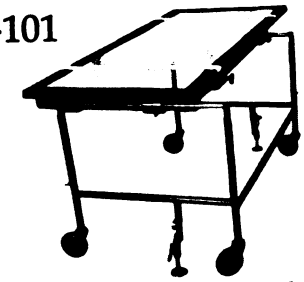

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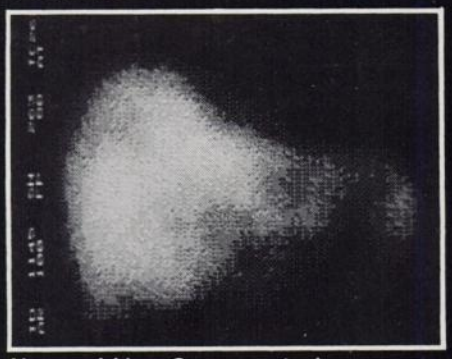
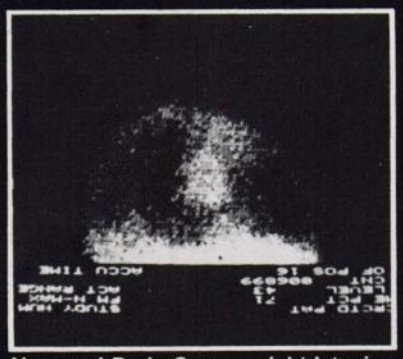
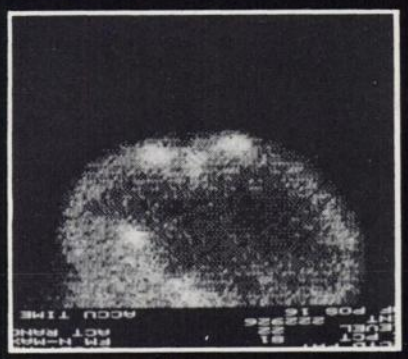


Abnormal Liver Scan — ant. view
(Metastatic Disease)
Study Time — 224 sec.
Isotope — 4mCi ^{99m}Tc Sulfur Colloid
Total Counts — 2,676,795

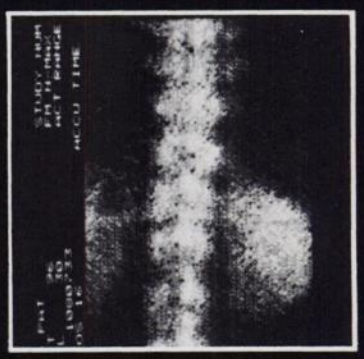


Abnormal Brain Scan — right lat. view
(CVA)
Study Time — 80 sec.
Isotope — 12mCi ^{99m}Tc
Total Counts — 806,899

Abnormal Liver Scan — ant. view
Study Time — 320 sec.
Isotope — 2mCi ^{99m}Tc
Total Counts — 445,502

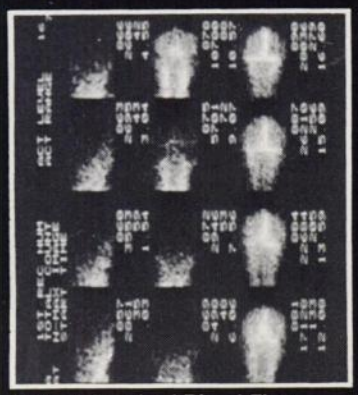


Brain-Bone Scan — left lat. view
(abnormal foci in the convexity and orbit)
Study Time — 240 sec.
Isotope — 6mCiTc Polyphosphate
Total Counts — 222,926

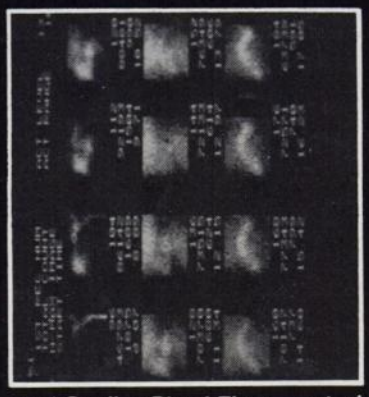


Normal Thoracic and Lumbar Spine Scan
— post. view
Study Time — 480 sec.
Isotope — 6mCiTc Polyphosphate
Total Counts — 1,000,733

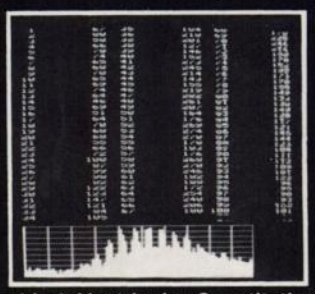
Dynamics



Normal Cerebral Blood Flow —
post. view
Accumulation Interval — 0.5 sec.
Display Interval — 1.5 sec.
Peak Counts per sec. — 26,210
Isotope — 15mCi $^{99m}TcO_4^-$

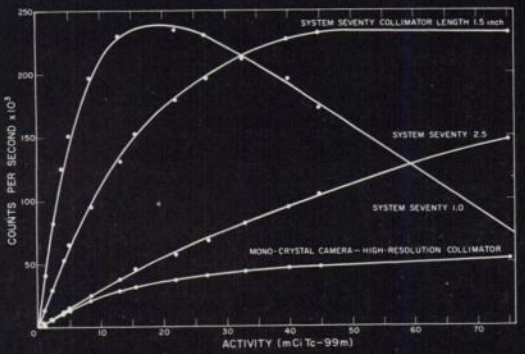


Normal Cardiac Blood Flow — ant. view
Accumulation Interval — 0.1 sec.
Display Interval — 1.0 sec.
Peak Counts per sec. — 78,147
Isotope — 15mCi $^{99m}TcO_4^-$



Normal Left Ventricular Quantitative
Histogram
Each double vertical line represents a
1.0 sec. time interval.
The entire histogram is 10.0 sec. long
and consists of 100, 0.1 sec. count
accumulations. This area-of-interest
histogram took less than 1.0 min. to
produce from end-of-study.
Note — definition of sinus rhythm of left
heart.

Performance



These curves provide a useful calibration of System Seventy. The observed count rate for 15 mCi of ^{99m}Tc for the 1.0, 1.5, and 2.5-inch thick collimators is 230,000, 150,000, and 45,000 cps respectively.

The count-rate curve obtained from a mono-crystal camera using the high-resolution collimator shows an efficiency about equal to that of the 2.5-inch thick collimator at low count rates and exhibited a saturation rate of about 40,000 cps. The same saturation rate has also been observed with the other collimators available for this type of system.

The efficiencies of the parallel-hole collimators are such that the saturation rate of 230,000 cps is observed with 15, 45, and 180 mCi of ^{99m}Tc with the 1.0, 1.5, and 2.5-inch thick collimators respectively.

System Seventy

or...

(how the unique combination of a programmed computer and a matrix detector allow you to practice the NOW and FUTURE art of nuclear medicine consistently, simply and reproducibly.)

Diagnostic Superiority

That's what you're really looking for. We routinely obtain 3-4mm. static resolution scans — regardless of energy. Dynamic studies can now be accomplished at high frame rates with count/unit time accumulations (at low dose rates) that are not achievable on any other gamma camera, and the results can be displayed or printed-out in histogram or numerical form within seconds of the end-of-study. That's diagnostic superiority!

Operation Simplicity

Our unique "back-lit" front panel reduces each operation to a logical-computer assisted-series of steps. Select the mode; i.e. Static/ Dynamic, and only those buttons or controls necessary to complete the study will be illuminated. That's operation simplicity!

New Standard!

The New Standard in diagnostic nuclear medicine. The only words that can describe a camera that is easy to use, delivers the greatest patient throughput, and provides the most technically superior diagnostic data while doing it.

No ONE of these terms really describes SYSTEM SEVENTY.

SYSTEM SEVENTY offers the highest spatial resolution, and that's why our static images are the best. This means that you can choose to increase patient throughput by selecting the best clinical measurement which optimizes spatial resolution and efficiency.

The system's high count rate capability (>200,000 cps) enhances the time resolution of dynamic studies which is a scientific necessity to achieve diagnostically meaningful evaluations of physiological time parameters. Stop thinking about the eventual possibility of more meaningful dynamic procedures and do them *now*, with SYSTEM SEVENTY.

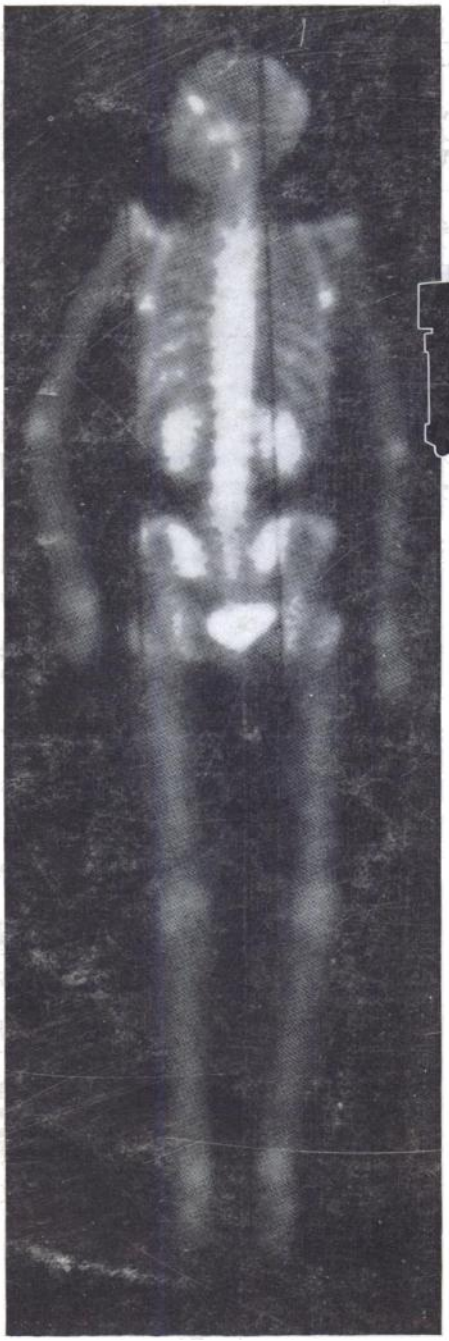
And, the operational functions we've wired into the system and the software support we provide leave very little for you or your technician/operators to learn in putting SYSTEM SEVENTY to work and realizing the technically superior results.

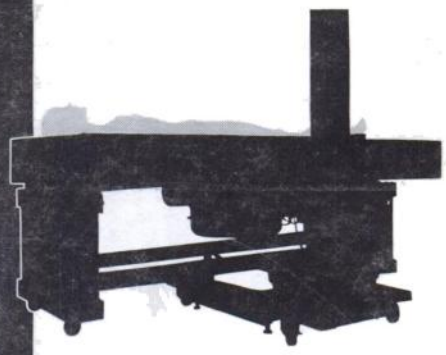
So, looking back on them, certainly ALL of those terms apply, though no one of them really does SYSTEM SEVENTY justice.

BA BAIRD-ATOMIC

Nuclear Division, 125 Middlesex Turnpike, Bedford, Ma. 01730, 617/276-6000, Telex: 923491, Cable BAIRDCOBFRD

Here's a better way to look into a problem.





Imagination has kept Searle Radiographics number one in gamma imaging, with developments such as Whole Body Scintiscan™. Scintiscan allows you to image the entire body for bone studies or single organ studies as you prefer. Number of scans required, termination point, and electronic aperture settings are all monitored electronically, insuring the uniformity of the complete scan.

On a scanning table monitored to travel within ±1% of the speed you select, the patient is only 5/8" from the highly sensitive Pho/Gamma detector. The resultant images may be viewed on standard X-ray or Polaroid films making comparisons of bone surveys with roentgenographic studies easier to visualize.

Operation of the Scintiscan system is easy also. If scan input does not agree with the patient positioning, a warning system relays the inconsistency to the technologist who may terminate the scan or reposition the patient.

Rigid standards of excellence made us number one in gamma imaging. Imagination keeps us there.

SEARLE

Searle Radiographics Inc.
(Formerly Nuclear-Chicago)
Subsidiary of G. D. Searle & Co.
2000 Nuclear Drive
Des Plaines, Illinois 60018