The T-7 Value minimizes misleading thyroid results

Pregnancy, oral contraceptives, estrogens, etc., can produce misleading results by falsely listing euthyroids in either the hypothyroid or hyperthyroid range if only one test is used to determine thyroid function.

"No single laboratory test of thyroid function is diagnostically perfect for all patients."*

What's more, patients may knowingly or unknowingly give a false history. To prevent this, schedule both a T-3 test (Triosorb) and a T-4 test (Tetrasorb), which supplies the T-7 Value (T-3 x T-4) — a highly reliable result:

- When both test values are decreased, the patient is usually hypothyroid.
- When both test values are increased, the patient is usually hyperthyroid.
- When both test values are normal, the patient is usually euthyroid.
- When a patient is on oral contraceptives or is pregnant, the test values move in opposite directions.

Millions of Triosorb tests have been performed over the past 7 years and today it is considered the standard of T-3 tests.

Tetrasorb is the first diagnostic kit offering a direct measurement of thyroid function by determining serum thyroxine.

Both Triosorb and Tetrasorb are *in vitro* tests providing accuracy, speed and convenience. They are available in disposable kits ready for use.

By multiplying the results of both tests, you arrive at the T-7 Value—a new level of confidence in thyroid diagnosis.

*Gold, A., Appl. Ther., 9:599, 1967.

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North Chicago, Illinois 60064

World's Leading Supplier of Radio-Pharmaceuticals

Vertretung für Europa: Labor-Service GmbH, Abt. Radiopharmazeutika, 6236 Eschborn/Ts, Germany, Postfach 1245

T-3 x T-4 = T-7 Value

TRIOSORB®-131 or TRIOSORB-125

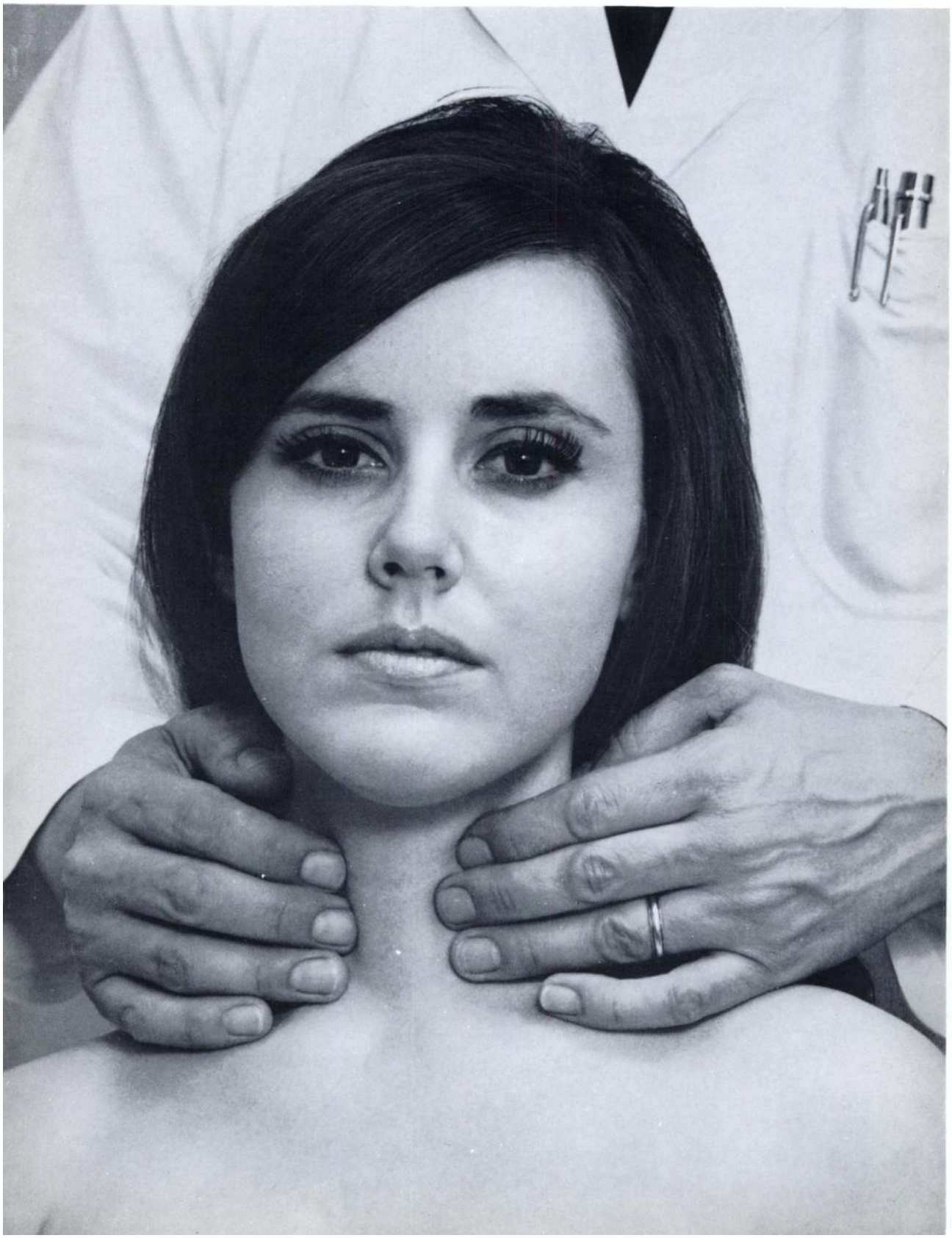
T-3 Diagnostic Kit

TETRASORB®-125

T-4 Diagnostic Kit

001187

Thyroid dysfunction? Pregnant? On the "pill"?



NEW! This is the pair to see

Announcing COLLOKIT™

KIT FOR TECHNETIUM SULFIDE Tc 99m

Collokit is a "cold" kit that can be stored without refrigeration until you're ready to use it. Then, following directions, it takes just minutes to prepare a sterile, non-pyrogenic colloidal solution of Technetium Sulfide Tc 99m. Collokit offers many advantages:

- **Simplicity** (ease of handling)
- **Mannitol stabilizer** (patent pending)
- **Economy** (less cost than ready-made products)
- **Convenience** (individual units, each with all of the components for a day's use)

Collokit is specifically designed for use with Pertgen-99m. It is not recommended for systems with eluates containing oxidizing agents (such as sodium hypochlorite).

PERTGEN®-99m TECHNETIUM Tc 99M GENERATOR KIT

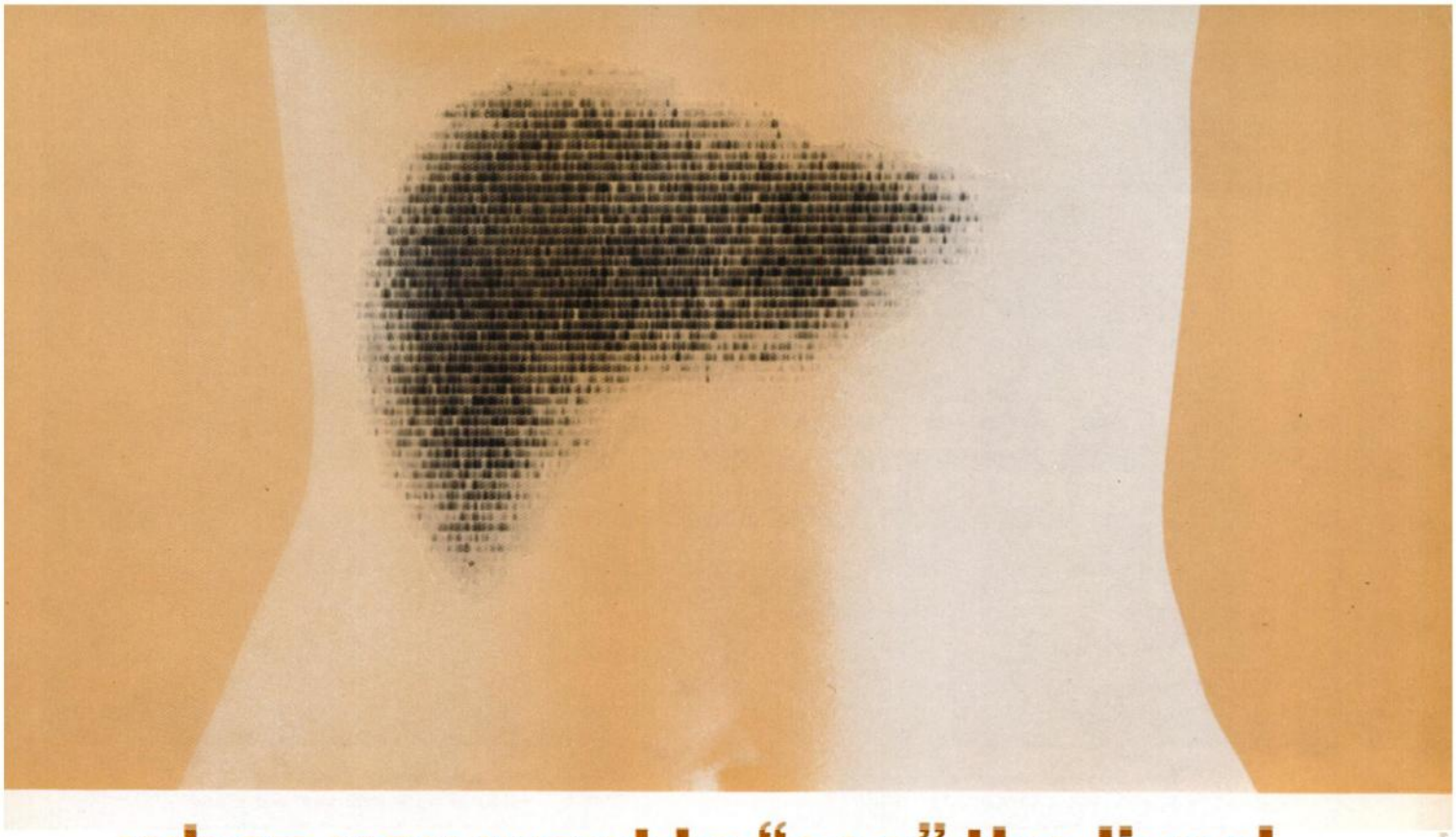
Fractional elutions – the exclusive Abbott Metering Unit permits fractional elutions of the Pertgen-99m Generator allowing the preparation of high assay material using Collokit.

Safety – the protection afforded by the unique Rayshield™ (shown underneath the Pertgen-99m Generator), means that Pertgen-99m can be used on the lab bench –there's no need to hide this system behind the bricks!

Choice of calibration – to best fit your needs, you can now order Pertgen-99m shipped on the weekend calibrated for Wednesday or Pertgen-99m shipped on Thursday calibrated for Tuesday.

Collokit and the consistent and high yields of Pertgen-99 eluates provide an unbeatable combination!

TM—Trademark.



when you want to "see" the liver!

TECHNETIUM SULFIDE Tc 99m

Indications: For direct visualization of the liver and spleen.

Warnings: Radio-pharmaceutical agents should not be administered to pregnant or lactating women, or to persons less than 18 years old, unless the information to be gained outweighs the hazards. Radio-pharmaceuticals should be used only by physicians who are qualified by specific training approved by an individual agency or institution already licensed in the use of radioisotopes.

Precautions: Care should be taken to ensure minimum radiation exposure to the patient as well as to all personnel. Although there have been no untoward reactions reported from the use of mannitol stabilized colloid, physicians administering this agent should be prepared to institute emergency resuscitation in the event of an anaphylactoid reaction. The absence of a lesion in the scan does not necessarily rule out its existence.

COLLOKIT
(KIT FOR TECHNETIUM SULFIDE Tc 99M)

How Supplied: Package of 6 units, each containing:

Vial 1: Sterile Thiosulfate—Mannitol Solution, 1 ml. Each ml. contains Mannitol 100 mg. and sodium thiosulfate 2.0 mg.

Vial 2: Sterile Hydrochloric Acid 0.25 N, 1 ml.

Vial 3: Sterile Buffer Solution, 2 ml. Each ml. contains potassium biphosphate 40.8 mg., sodium hydroxide 5 mg., and disodium edetate 1 mg. And accessory equipment.

PERTGEN-99m
(TECHNETIUM Tc 99M GENERATOR KIT)

How Supplied: 50, 100, or 200 millicurie generators, and accessory equipment.

007221

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North Chicago, Illinois 60064
World's Leading Supplier of Radio-Pharmaceuticals
Vertretung für Europa: Labor-Service GmbH, Abt. Radiopharmazeutika, 6236 Eschborn/Ts, Germany, Postfach 1245

CHARCOAT T-3. No fuss, no muss, no multiple pipetting or rinsing.

You don't even have to throw in a sponge. □ *What's more, CHARCOAT T-3 tests take only thirty minutes — start to finish — without complicated setups. You do everything in one little two-part vial.* □ *Merely pipette 0.5 ml of patient serum into each test vial, invert, incubate, centrifuge, and count the supernatant.* □ *But don't take our word for how simple and economical CHARCOAT T-3 kits are. Put one to the test. A standard kit (13 test vials) is only $20, and just a phone call away. Moreover, the extra long shelf-life of the CHARCOAT T-3 test kit makes quantity discount purchases practical.* □ *Ask about our Automatic T-3 Computer. Easy to use—no calculations. $1680 sale or lease.*

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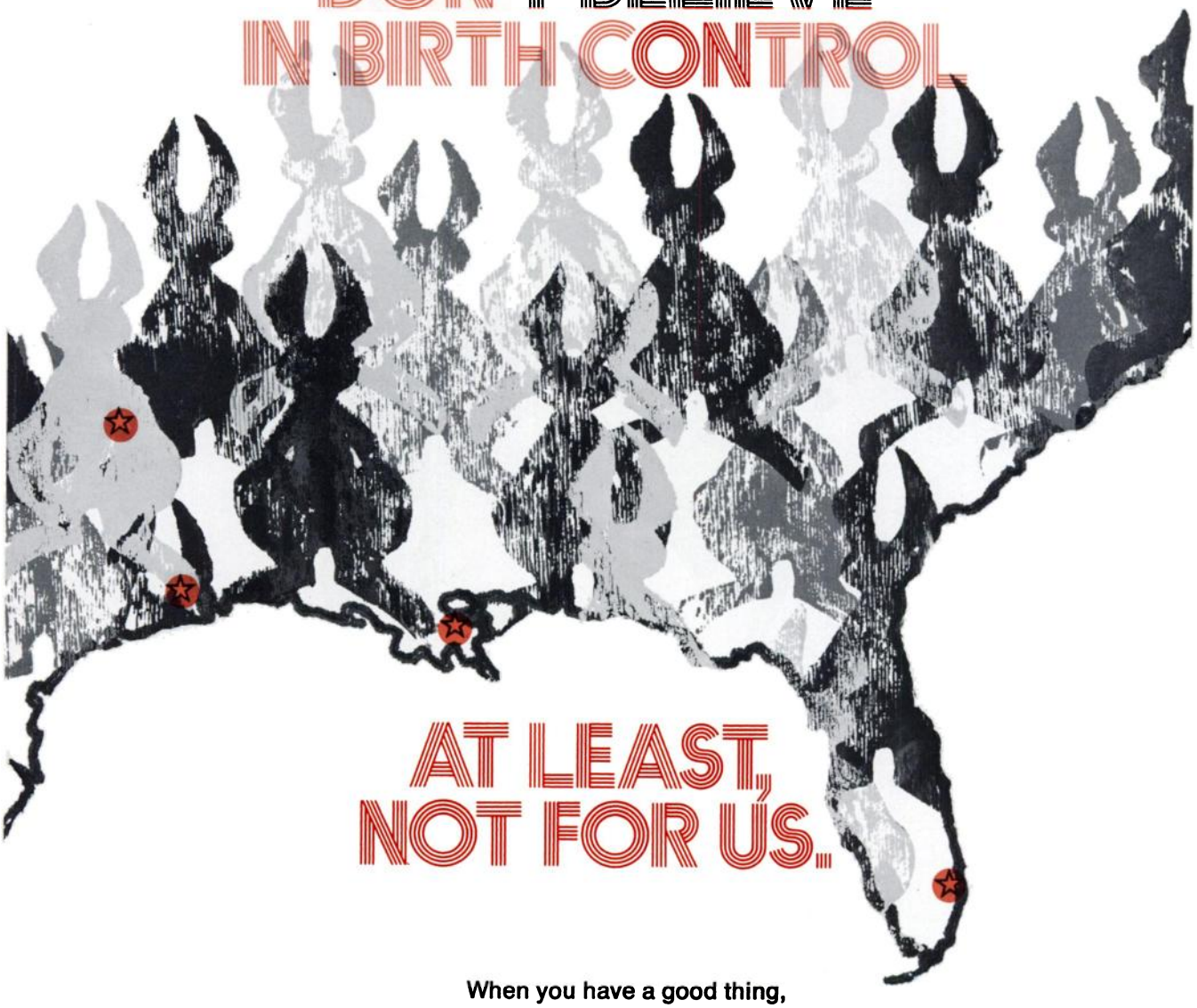
New England Nuclear Corp.

NEN Pharmaceutical Division
575 Albany Street, Boston, Mass. 02118
Telephone (617) 426-7311 Telex 094-6582

WE DON'T BELIEVE IN BIRTH CONTROL



AT LEAST, NOT FOR US.

When you have a good thing, you like to see it grow. That's why we've added three branch laboratories to the Hastings family.

Now you can get the highest obtainable quality radiopharmaceuticals in Dallas, New Orleans, and Miami, as well as in Houston.

We're doing our part to better serve the population explosion.

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Dallas, Texas 75235

4031 Jefferson Highway
New Orleans, Louisiana 70121

1549 San Remo
Coral Gables, Florida 33146

Radioimmunoassay Kits from Schwarz/Mann.

A major factor in radiochemicals makes a major commitment to a major new field.

Renin Activity

Developed by Schwarz/Mann, this is the first such commercially available kit for the determination of renin activity by the measurement of generated Angiotensin I. Highly sensitive, highly specific, rapid method for serum samples. Contains 4 vials Angiotensin I antiserum (each vial sufficient for 100 tubes), 1 vial ^{125}I Angiotensin I, and 1 vial Angiotensin I standard solution. Kit sufficient for 400 tubes.

Insulin

Permits measurement of insulin concentration in small volumes of blood plasma, urine, or tissue homogenates. Contains 1 vial ^{125}I-labeled pig insulin, 1 vial human insulin standard solution, and five vials of Insulin Binding Reagent (each vial sufficient for 80 individual tubes). Kit sufficient for 400 tubes. (Note: Developed by the CEA-CEN-SORIN Association in collaboration with the Laboratory of Clinical Physiology of C.N.R., Pisa, Italy.)

Human Growth Hormone

Permits measurement of low concentrations of Human Growth Hormone in small volumes of serum or plasma. Contains 1 vial ^{125}I-labeled HGH solution, 1 vial HGH standard solution, two vials anti-HGH antiserum (produced in guinea pigs), and two vials of precipitating antiserum (produced in rabbits). One vial of each of the two antibodies is sufficient for 80 tubes. Each kit is sufficient for 160 tubes. (Note: Developed by the CEA-CEN-SORIN Association in collaboration with the Laboratory of Clinical Physiology of C.N.R., Pisa, Italy.)

Digoxin

For monitoring digoxin levels in cardiac patients. Being developed by Schwarz/Mann—to be introduced shortly.

Subsequent Introductions

Schwarz/Mann is actively involved in the development of additional radioimmunoassay kits. To be kept informed of the newest introductions, please check the appropriate box on the coupon below.

Note: An AEC or participating state radioactive license is required to order these kits. Please include appropriate license number on coupon. Thank you.

Schwarz/Mann
Mountain View Avenue, Orangeburg, New York 10962
Division of Becton, Dickinson and Company

Order form for kits and/or information.

Kit	Catalog Number	Price				Quantity Desired	Check Here For Information
Renin Activity	0750-03	$75 ea.	$70 ea. (2-5)	$65 ea. (6-11)	$60 ea. (12+)		☐
Insulin	0750-02	$55 ea.	$50 ea. (2-4)	$45 ea. (5-9)	$40 ea. (10+)		☐
HGH	0750-01	$60 ea.	$55 ea. (2-4)	$50 ea. (5-9)	$45 ea. (10+)		☐
Digoxin	0750-04	—	—	—	—		☐
Note: To be informed of future radioimmunoassay kit introductions, please check here. ☐							

Date_____ Order Number_____ Radioactive License Number_____

Name_____ Title_____ Department_____

Organization_____

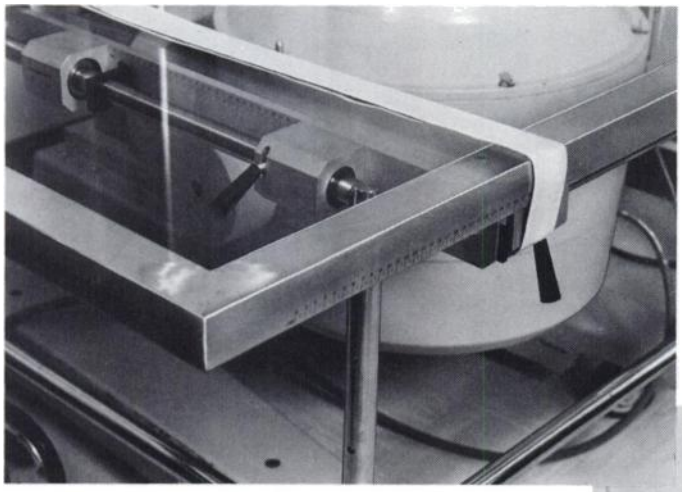
Address_____ Phone Number_____

City_____ State_____ Zip_____

K

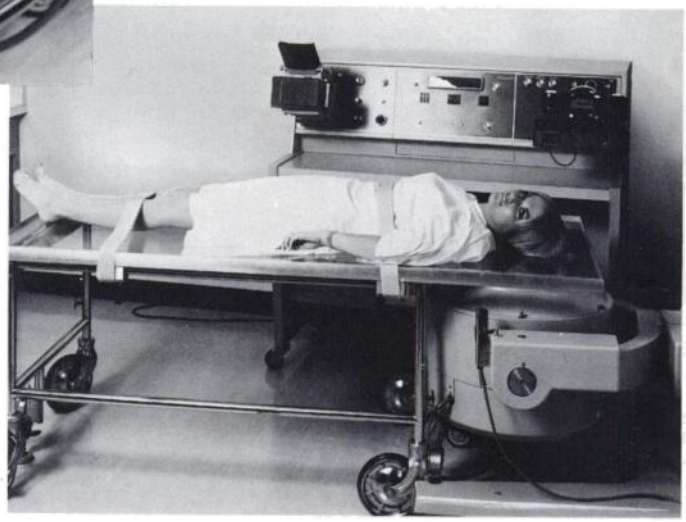
Schwarz/Mann, Mountain View Avenue, Orangeburg, New York 10962

Finally.. THE PGL MODEL 500 A Table for Imaging With a Movable Top



Graduated calibration scale and positive cam locks assures reproducible positioning.

The "floating" top overhangs to allow supine posterior brain views. Ten inches of travel in both longitudinal and lateral planes.



No crossmembers or support bars to interfere with placement of probes, scanner heads, or camera detectors.

WE WILL ARRANGE FOR YOU
TO SEE ONE IN CLINICAL USE
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Pulmonary problem?
Answer: Macroscan-131

- **Uniformity of particle size distribution**
- **Minimal free iodide**
- **Superior manufacturing technique** (supernatant is removed in the manufacturing process)
- **Safety** (no recorded reactions to date in thousands of scans)
- **Cost** (lowest of the 3 leading products)

Macroscan-131 is aseptically prepared and non-pyrogenic. It is ready to use and should not be heated prior to use.

INDICATIONS: For scintillation scanning of the lungs to evaluate total, unilateral, and regional arterial perfusion of the lungs.

WARNINGS: Radio-pharmaceutical agents should not be administered to pregnant or lactating women, or to persons less than 18 years old, unless the information to be gained outweighs the hazards. There is a theoretical hazard in acute cor pulmonale, because of the temporary small additional mechanical impediment to pulmonary blood flow. The possibility of an immunological response to albumin should be kept in mind when serial scans are performed. If blood is withdrawn into a syringe containing the drug, the injection should be made without delay to avoid possible clot formation.

PRECAUTIONS, ADVERSE REACTIONS: Care should be taken to administer the minimum dose consistent with patient safety and validity of data. The thyroid gland should be protected by prophylactic administration of concentrated iodide solution. Urticaria and acute cor pulmonale, possibly related to the drug, have occurred.

001189

P.M.–If it's a pulmonary problem, think Macroscan-131.

MACROSCAN®-131 AGGREGATED RADIO-IODINATED (I^{131}) ALBUMIN (HUMAN)

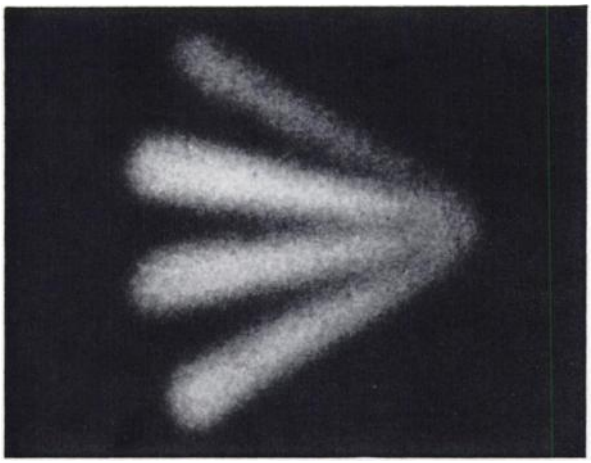
ABBOTT LABORATORIES North Chicago, Illinois 60064 World's Leading Supplier of Radio-Pharmaceuticals

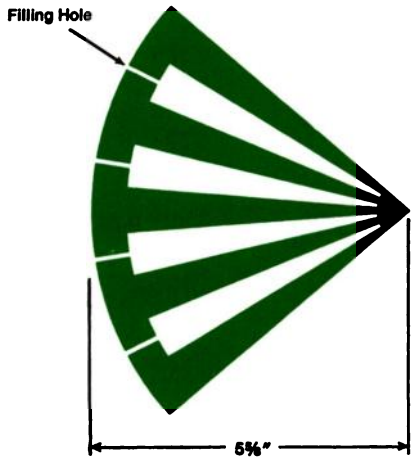
Vertretung für Europa: Labor-Service GmbH, Abt. Radiopharmazeutika, 6236 Eschborn/Ts, **Germany, Postfach 1245**

The Picker Dynacamera 2:

The scintillation camera with both high resolution and a large *undistorted* field of view:

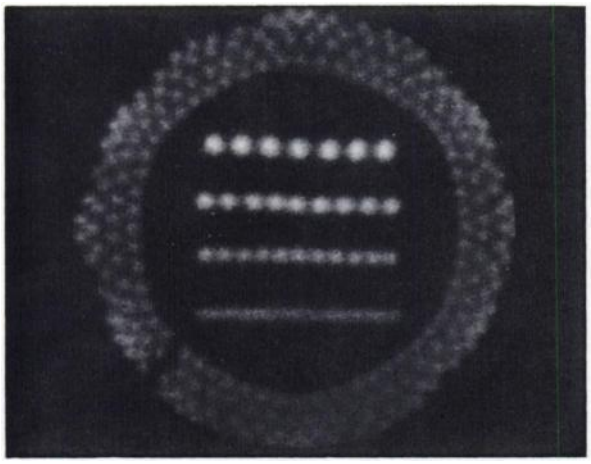
Resolution

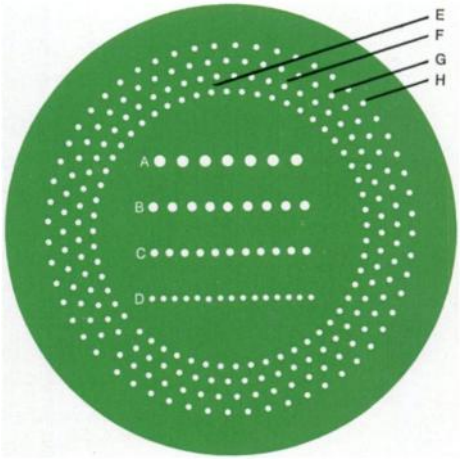




Phantom description: 3/8″ thick lucite with four 1/8″ thick radiating voids filled with activity.

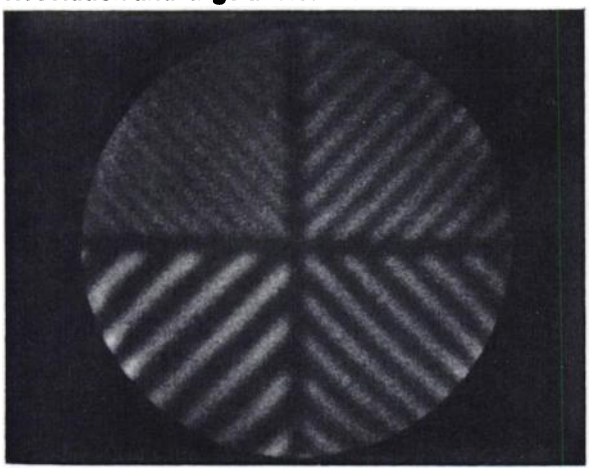
Resolution and large undistorted field of view

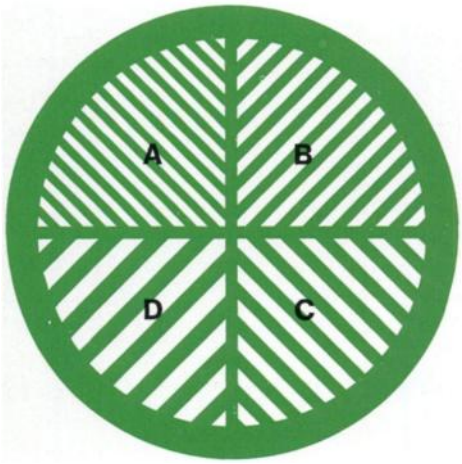




Phantom description: 1/8″ thick by 15″ dia. lead circle mounted between two circular pieces of 1/8″ thick lucite.
A. 3/8″ dia. 3/8″ space
B. 5/16″ dia., 5/16″ space
C. 1/4″ dia., 1/4″ space
D. 3/16″ dia., 3/16″ space
E. 3/16″ dia. holes with centers on 9″ dia. circle.
F. 3/16″ dia. holes with centers on 10″ dia. circle.
G. 3/16″ dia. holes with centers on 11″ dia. circle.
H. 3/16″ dia. holes with centers on 12″ dia. circle.

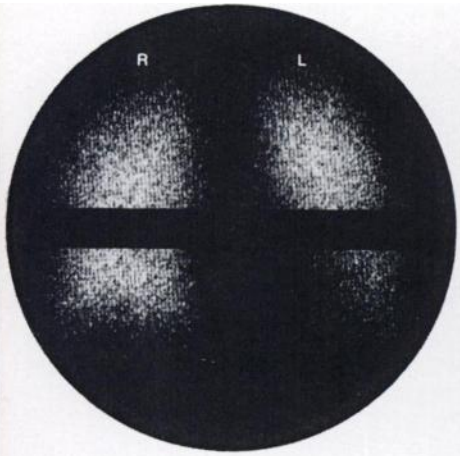
Resolution and large undistorted field of view

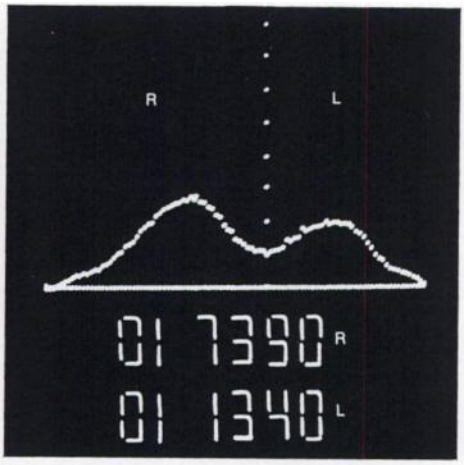




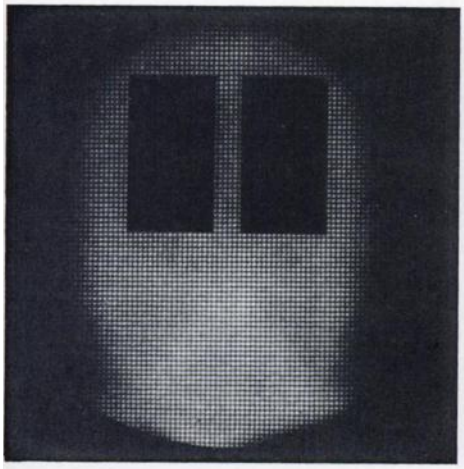
Phantom description: 1/8″ thick lead bars mounted between two circular pieces of 1/8″ thick lucite. A 14″ outside diameter, 1″ wide, lead ring surrounds the bars.
A. 1/4″ bars, 1/4″ spaces
B. 5/16″ bars, 5/16″ spaces
C. 3/8″ bars, 3/8″ spaces
D. 1/2″ bars, 1/2″ spaces

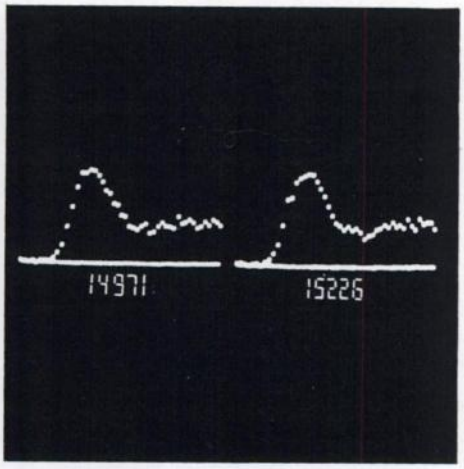
The scintillation camera with more clinically useful and proven capabilities:



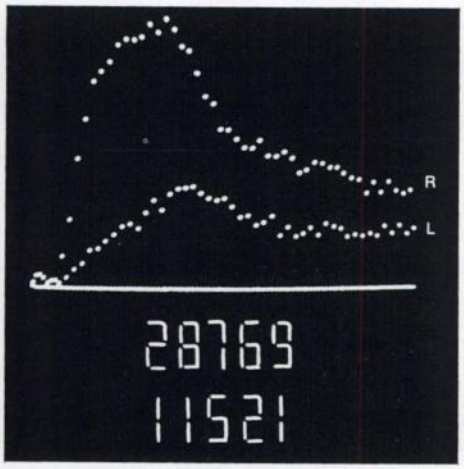


Quantification of static studies
(a built-in capability)
Dynacamera 2 is the scintillation camera that provides both Scintigrams and the total count in an organ or any portion of it.





Quantitative regions of interest
(a built-in capability)
Dynacamera 2 permits the selection of two regions of interest and simultaneously displays both count rate vs. time and total integrated counts in both regions.



Quantitative dynamic studies
(a built-in capability)
Dynacamera 2 performs quantitative dynamic function studies in selected regions without the need for modifications, accessory systems, or extra cost and produces digital histograms simultaneously for quantification of each discrete phase.

Please call your local Picker technical specialist for information about other Dynacamera 2 features or to learn about Dynacamera 3, the scintillation camera with a built-in image enhancement system. Or write Picker Medical Products Division, Dept. N, 595 Miner Road, Cleveland, Ohio 44143.

PICKER

The "single source responsibility" company.

That's a wooden Indian all right. But he unloaded Manhattan before jacked-up subway fares and waterless meals. So he isn't taking any wooden nickels.

He knows reliable service makes far more than a nickel's worth of difference.

That's why our new catalogue lists such a wide range of radiopharmaceuticals. Competitively priced and pre-calibrated.

Purity and stability are assured. All products for injection are sterile, nonpyrogenic. Stock items subject to degradation are reanalyzed at carefully chosen intervals. Further assurance that the drugs you use are what we say they are.

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What this country needs is a good Ni isotope

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	PGL 35mm System	Polaroid
Film Cost	$120 per year	$3000 per year (More than the total cost of the PGL System)
Picture Quality	Extended grey scale	Limited Latitude
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General Electric introduces the first fully portable, ultra-sensitive nuclear counting system. And, it's under $3,000.

The NUCLE EYE(TM) Monitor.

This new system can count low-energy radiations *in vivo* you couldn't count before—at remarkably low background levels. An advanced solid-state "Proportional Counter" makes it possible.

You can now think of using ^{125}I for organ scanning, for example. For the first time, use low-energy emitting isotopes like ^{35}S, ^{55}Fe and ^{45}Ca in *in vivo* experimental work. X-ray fluorescence scanning and analysis. Tumor detection and measurement of tumor dynamics. Detection of ^{55}Fe x-rays in blood measurements and ^{51}Cr x-rays in spleen scanning. Carbon-14 research.

A patient's body heat creates no problem. The NUCLE EYE Monitor maintains its unique low-background counting capability from room temperature to 85°C. Without cooling.

What's more, the eight-pound system is fully portable. Take it from laboratory to laboratory. Even to patient bedside. Nickel-cadmium batteries give five hours of continuous operation before recharging. 162-53

Want more information about this new system? Write Space Technology Products, P.O. Box 8439, Philadelphia, Pa. 19101. Or phone (215) 962-8300.

GENERAL ELECTRIC

Only Two Dosecalibrators assay activity and compute dose.

RADX makes both!

Both models of the Radx isotope dosecalibrator, the Mark IV and the Mark V, offer you instantaneous pushbutton computation of the total vial assay and volume to be injected for a prescribed millicurie dose. That's just one of the many unique features found in Radx instruments. Consider three more:

1. Instant adaptation to new radionuclides (your hedge against obsolescense)
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3. Your choice of analog or digital read-out (at overall costs 15% to 42% lower than competitive units — instruments which cannot offer all of the above features)

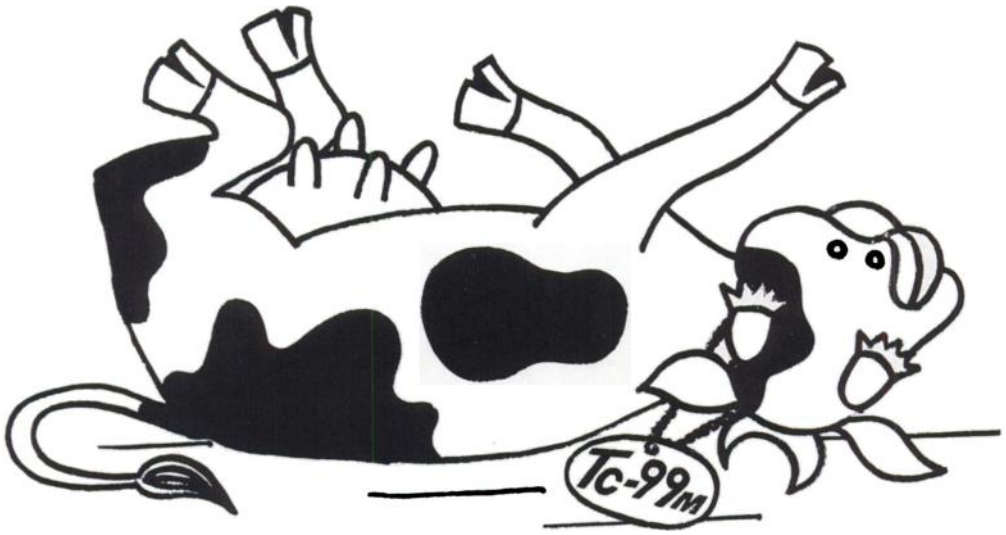
There's still more. Check with us. We will send you a brochure and, if you like, make arrangements for a demonstration in your laboratory.

RADX CORP.

P. O. Box 19164, Houston, Texas 77024.

Phone (713) 468-9628

THE COW IS DEAD...



...MEKTec-99™

an Automatic Liquid-Liquid Extraction System for the Production of High Quality Technetium-99m, is Now Available to Those Hospital Isotope Units Now Using a Molybdenum Column Generator!

What is an automatic MEK or Liquid-Liquid Extraction System? Simply this!

MEKTec-99 automatically measures and mixes Methyl Ethyl Ketone (MEK) in a shielded container with an aqueous solution containing Mo-99/Tc-99m. Phase separation is allowed to occur. The ketone layer containing Tc-99m is transferred automatically through an alumina adsorbent column and a sterilizing membrane filter to a sterile, pyrogen-free vial. The MEK is then automatically evaporated by MEK-Tec-99.

The sterile, pyrogen-free, carrier free Tc-99m is now ready for dilution with any aqueous media such as sodium chloride injection, to any desired volume, and for quick and easy processing into chemical compounds such as technetium sulfur colloid and albumin.

The advantages of a MEK Extraction System have been known for some time. Indeed, several commercial suppliers of "instant technetium" and several hospital units have been using this method, but on a time consuming manual basis.

In terms of QUALITY, highlighted by the far lower molybdenum and alumina levels in the product, COST, indicated by the weekly savings, and CONVENIENCE of a completely automated extraction system, the MEKTec-99 Automatic Extraction System is far superior to the now outmoded generator (cow).

CALIFORNIA RADIOCHEMICALS, INC. ANNOUNCES:

MEKTec-99™

A Completely Automated Liquid-Liquid Extraction System for the Production of Tc-99m. "All Molybdenum Column Generators Are Now Obsolete!"

ELIMINATES . . .
moly breakthrough problems!

GUARANTEES . . .
consistent, high technetium yields!

CONCENTRATES . . .
technetium for any desired volume!

REDUCES . . .
weekly cost below all Tc-99m generators!

Mo-99 at Delivery	Tc-99m Yield (approximate)	*Cost/ Week
200 mCi	160 mCi	$120
400 mCi	320 mCi	155
600 mCi	480 mCi	205

Greater quantities available upon request.

* Cost is based upon a one year service agreement, cancellable within the first 30 days, and includes sterile vials, filter cartridges, weekly shipments of Mo-99 and MEK, and use of a MEKTec-99 Automatic Extraction System.

Mo-99 is delivered Tuesday mornings throughout the U.S. with calibration for 12 Noon, Pacific Time. Weekly delivery and an initial nominal freight charge are extra.

OPERATING PROCEDURE

1. Each week insert a fresh filter cartridge into the machine. Insert the transfer needle into the new shipment of Mo-99. The MEKTec-99 Extraction System will automatically transfer the Mo to the mixing reservoir which is shielded by 3½" of lead.

2. Initially set the MEKTec-99 clock to the time and to the days of the week for which the product is desired.

3. Set the MEKTec-99 Extractor to AUTO. Insert a sterile collecting vial and replenish the MEK supply.

The product will automatically be delivered dry, within the sterile vial, at the time and on the days specified. The product is now ready for dilution as may be required.

4. For additional Tc-99m requirements set the control key to MANUAL and immediately initiate an extraction with a yield of approximately 70%.

To institute service or for additional details about the MEKTec-99 Automatic Liquid-Liquid Extraction System, contact your nearest sales agent office!

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Behold the "mini-scan!" Makes possible whole body scans recorded 5-to-1, all on single, comprehensive, 14" x 17" sheets of film with no loss in diagnostic quality or detail, and a big gain in efficiency.

Ohio Nuclear series 84 radioisotope scanners equipped with this remarkable option, not only provide basic 1:1 scale recordings, but **2:1 and 5:1 minified recordings**. This avoids serial scan examination and consolidates diagnosis in a compact, more perceptible and uniform visual field.

5:1 rectilinear field reduction capability is equivalent to increasing count rate by a factor of 25, which in turn, affords the possibility for corresponding increases in scan speed per unit area of examination.

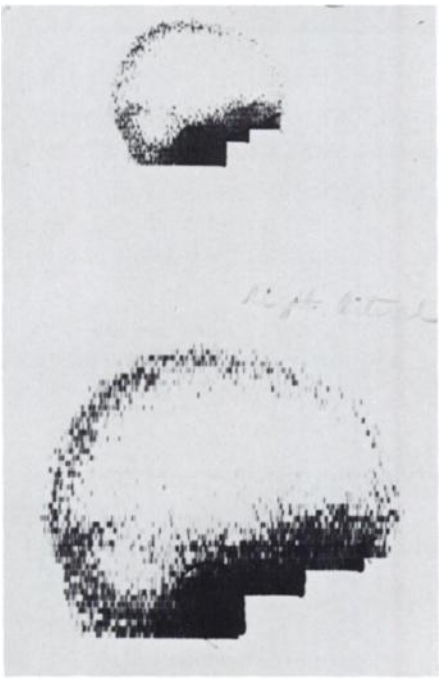
Think about "mini-scan" next time you have to piece together two or five pieces of film for a comprehensive analysis.

Full descriptive brochures available on the versatile 84 and compact 76 scanners.

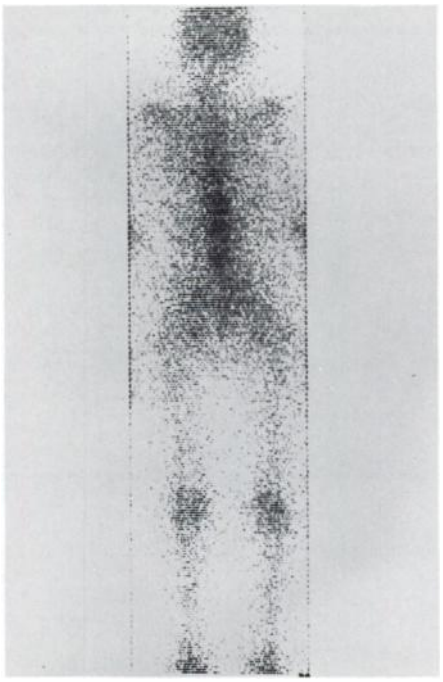
ohio-nuclear, inc.

7700 St. Clair Ave., Mentor, Ohio 44060 (216) 946-5506

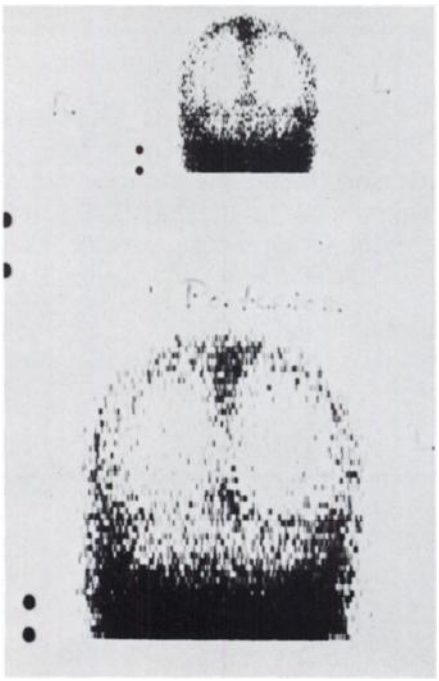
think scan minification



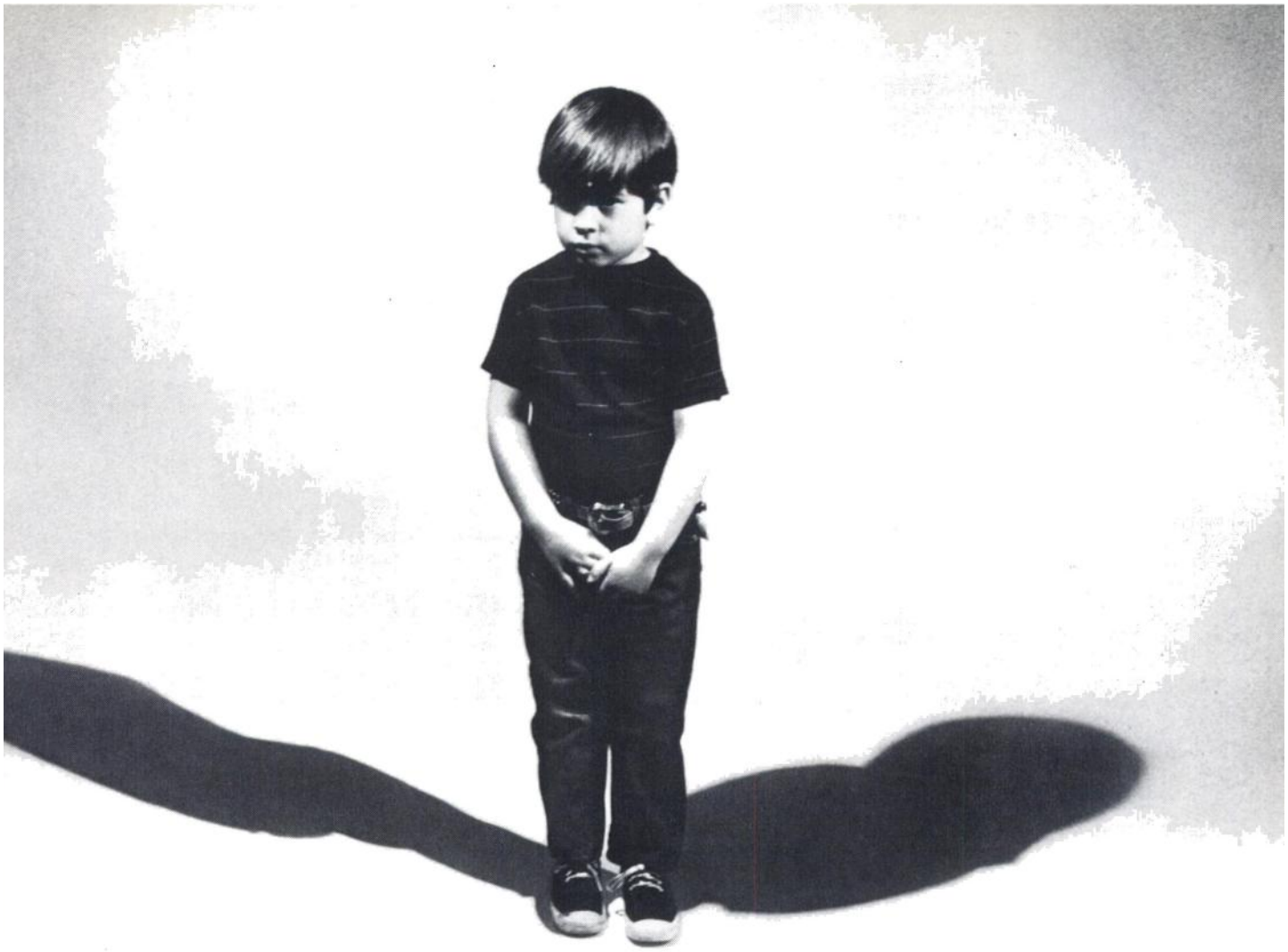
Brain scan:
1:1 and 2:1 right lateral.
Contrast enhancement 60%.
Typical speeds 250 to 350 cm/min.



Whole-body bone scan:
Typical speeds 400 to 700 cm/min.



Brain scan:
1:1 and 2:1 posterior—anterior.
Contrast enhancement 50%.
Typical speeds 280 to 350 cm/min.



RADIOIMMUNOASSAY– the long and short of it

Radioimmunoassay offers one of the most sensitive methods available for testing in medicine. This is because it can be used to measure physiological levels of protein hormones in millimicrogram to micromicrogram quantities. But obstacles in developing antibodies (an essential part of the test) have limited the use of radioimmunoassays.

Now, Abbott has helped this situation by introducing a complete radioimmunoassay kit — HGH-125 Imusay Kit.

With this kit, the quantitative determination of human growth hormone in serum becomes a practical matter. Children, whose growth rates are suspect, can be checked for a hypopituitary or an acromegalic condition. Since this is an *in vitro* test, the child receives no radioactivity.

The HGH-125 Imusay Kit introduces tomorrow's diagnostic tools today — and this is only the beginning. Abbott is now working on additional radioimmunoassay kits for other hormones.

TM—Trademark.

007225

HGH-125 IMUSAY™ Kit

HGH IMMUNOASSAY KIT

ABBOTT LABORATORIES

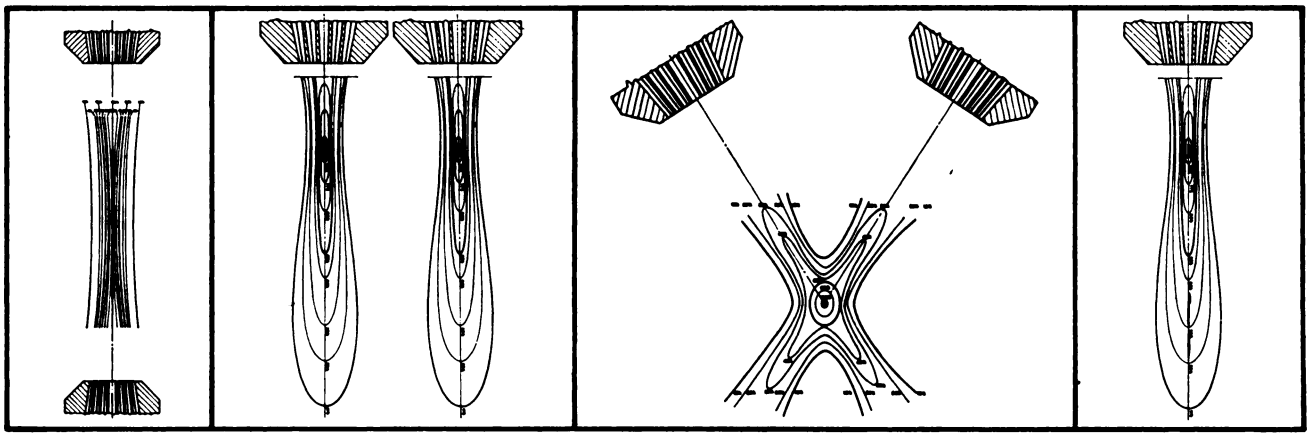
North Chicago, Illinois 60064

World's Leading Supplier of Radio-Pharmaceuticals

Vertretung für Europa: Labor-Service GmbH, Abt. Radiopharmazeutika, 6236 Eschborn/Ts, Germany, Postfach 1245

How many dual-headed nuclear scanners can be positioned in all these ways?

Just one.



The new Raytheon family of digital scanners provides the ultimate in head placement flexibility. Tomograms, oblique scans of normally masked crania base lesions, and parallel headed scanning of large areas are just some of the clinical possibilities. Of course, Raytheon scanners can operate in the conventional opposed detector position with data subtraction, addition and independent detector operation.

Versatility just begins in detector head placement. Raytheon scanners feature digital data acquisition and manipulation. Four data display channels are available for photorecord and 9-color dot recording, with or without data blending.

Scan set up is simplicity itself – insert the automatic energy selector plug, search for the hot spot, and select a scan speed (up to 600 cm/min) and line spacing, which automatically changes the dimensions of the light aperture. Then you can read out information density and film contrast on a single easy-to-read meter. Raw scan data can be fed to a magnetic tape recorder for subsequent set-up correction – or for that matter, data enhancement or reduction at speeds up to four times as fast as the original.

What's more, Raytheon scanners can adapt to meet your changing clinical requirements. A single 3″ scanner can be hospital converted to a dual 3″, single 5″, or dual 5″.

For more information on the new Raytheon family of nuclear scanners, contact Raytheon Company, Medical Electronics, 190 Willow Street, Waltham, Massachusetts 02154. Tel: (617) 899-5949.

In medical electronics . . . Raytheon makes things happen.

RAYTHEON

A new thyroid function information system from Ames, specifically designed for convenience in laboratory T-3 testing.

AMES now brings you a thyroid function information system based on the most advanced instrumentation and the most efficient T-3 test. No manual calculations are needed, T-3 test time is cut in half, and batch testing is facilitated. The system consists of THYRIMETER™ (Direct Ratio Reading Gamma Counter), a newly designed instrument providing *automatic* direct ratio readout, to save time and prevent calculating errors, and TRILUTE®(125I Column T-3 Test). With this system, a complete T-3 determination takes from 20 to 25 minutes from start to finish; each determination requires approximately 4 minutes actual working time.

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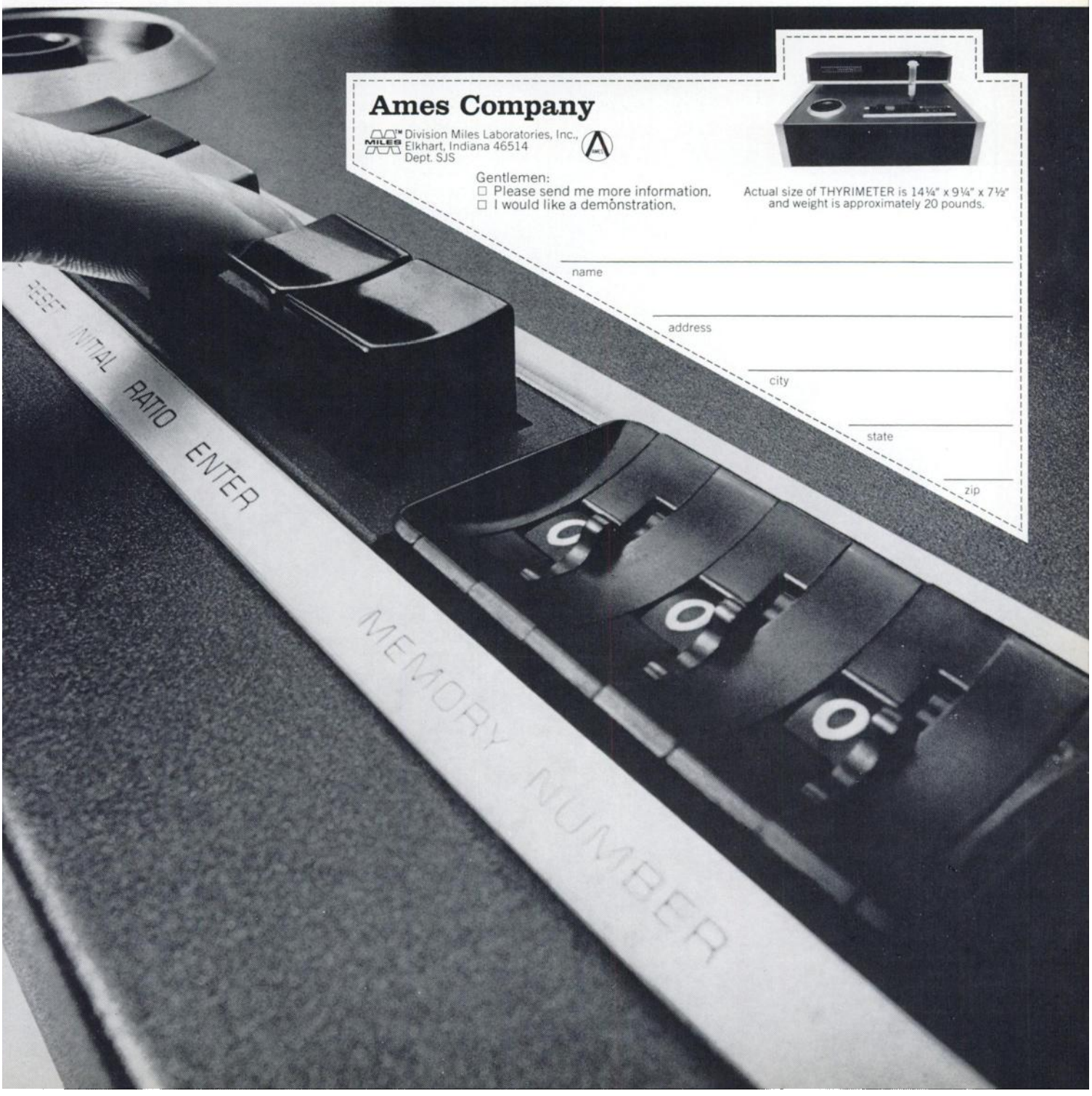

Ames Company

MILES™ Division Miles Laboratories, Inc.
Elkhart, Indiana 46514
Dept. SJS

Gentlemen:
☐ Please send me more information.
☐ I would like a demonstration.

Actual size of THYRIMETER is 14¼" x 9¼" x 7½" and weight is approximately 20 pounds.

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address _____

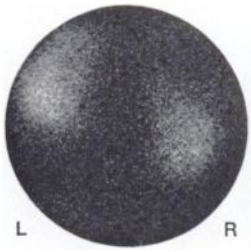
city _____

state _____

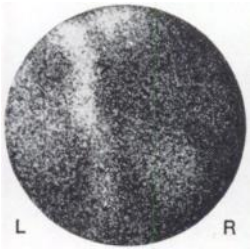
zip _____

THE PHO/GAMMA SCINTILLATION CAMERA.

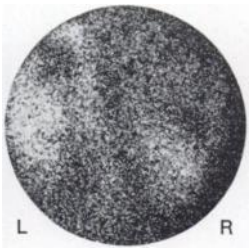
^{197}Hg SCINTIPHOTO.
POSTERIOR VIEW.



^{99m}Tc SERIAL SCINTIPHOTOS.
POSTERIOR VIEW.



0-12 SEC.



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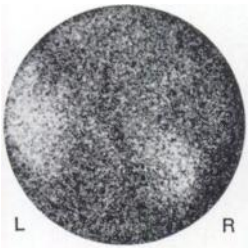

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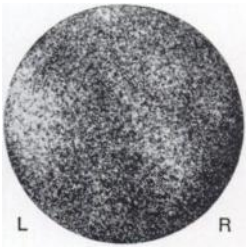

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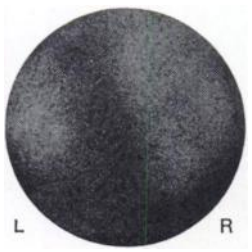
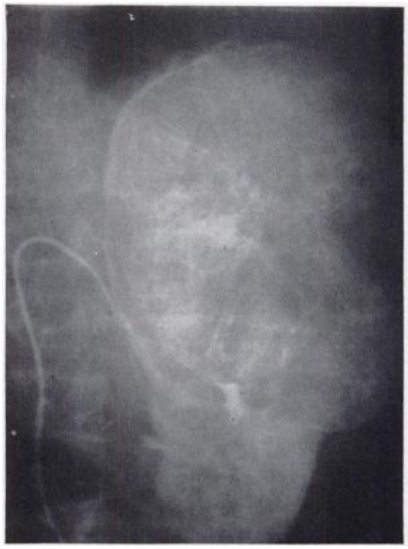


300K ACCUMULATED
COUNTS.

SELECTIVE
RIGHT RENAL ANGIOGRAM.
INVERTED AP VIEW.



The Renal Study

A Basic Technique for the Evaluation of Kidney Function with the Pho/Gamma® Scintillation Camera

Serial scintiphotography, using ^{99m}technetium pertechnetate, is one of several dynamic techniques for renal study with the Pho/Gamma Scintillation Camera.

SETTING-UP. The patient lies prone beneath the Pho/Gamma detector which is equipped with the low-energy collimator. The lower two-thirds of the patient's abdomen is compressed to decrease kidney motion.

ISOTOPE AND DOSE. To screen for abnormalities, a preliminary static study is performed using ^{197}Hg chloromerodrin. After evaluation of this study and identification of an apparent defect, an intravenous bolus injection of 10 mC of ^{99m}Tc pertechnetate is administered to permit dynamic scintiphotography.

DATA ACCUMULATION. The ^{197}Hg chloromerodrin scintiphoto represents 50,000 counts in a 4-minute period. The serial scintiphotos of ^{99m}Tc in renal transit are taken at selected intervals. This is followed by a static scintiphoto accumulating 300,000 counts.

Alternative dynamic methods of data accumulation could have included: (1) filming of the live-time "fluoroscopic" display on a persistence scope with a Super-8 movie camera, (2) operation of the Pho/Gamma detector in the dual-output mode, with recording of data from each kidney on a dual-channel ratemeter/dual-pen chart recorder, and (3) data recording in digital form on either the Nuclear-Chicago Data-Store/Playback Accessory or the CDS-4096 Clinical Data System. These last two system accessories produce additional qualitative and quantitative data by virtue of their ability to store information for subsequent replaying, processing, and manipulation.

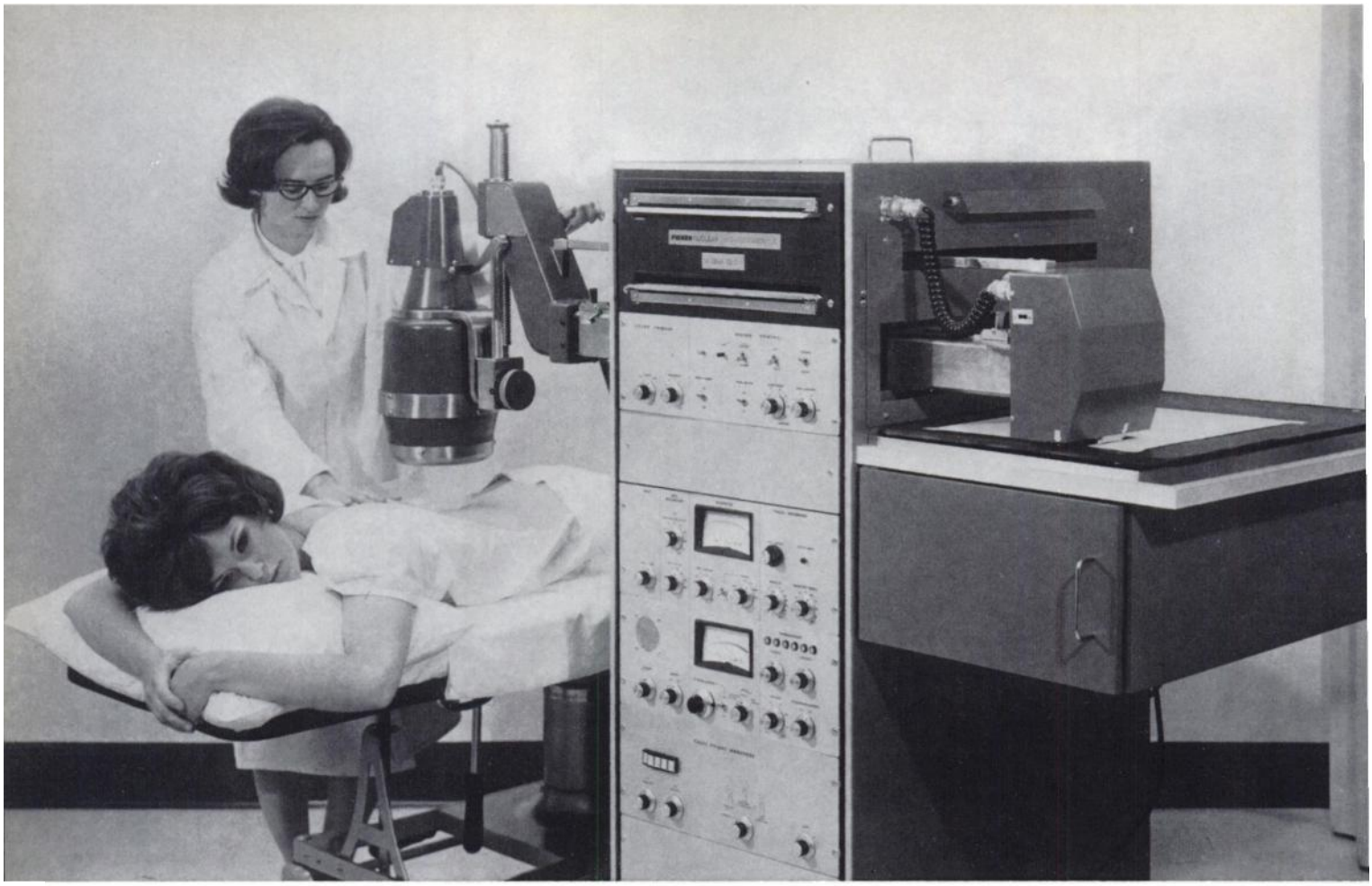
CASE HISTORY. The renal study illustrated on the opposite page is that of a patient with the following history: Female, 58 years old. Dull right-flank pain radiating to right groin of about one-week's duration. No associated hematuria or dysuria.

EVALUATION. The ^{197}Hg chloromerodrin scintiphoto shows very poor activity in the upper portion of the right kidney. The serial scintiphotos demonstrate gradual filling-in of the upper pole of the right kidney.

CONCLUSIONS. The dynamic Pho/Gamma renal study strongly suggests the possibility of a vascular neoplasm in the right kidney.

Confirmation of such pathology was obtained by a selective renal angiogram. As illustrated, a massive tumor is present in the right renal area.

The basic techniques of static imaging to screen for abnormalities followed by serial scintiphotography thus yielded information invaluable to the establishment of a differential diagnosis. Other techniques, utilizing the Pho/Gamma's wide-ranging data-acquisition capabilities, can similarly afford the clinician supplementary data leading to more definitive diagnoses.



The case for the classical radioisotope scanner, or...

Why does Picker keep refining and improving its basic rectilinear scanner (Magnascanner® 500), when it also has a most sophisticated high-speed scanner (Dynapix®), and two exceptional cameras (Dynacamera™ and Magnacamera®)?

Because: despite the rapid forward thrust of progress —which we ourselves aid, abet, foster and contribute to —nothing we or anyone else has done has obsoleted the basic rectilinear scanner. What basic scanners do, nothing does better, and few do as well. Examples?

For a small hospital starting a diagnostic radioisotope laboratory with a small patient load and a modest budget, there is nothing quite as appropriate as a scanner. Hence, four out of five nuclear medicine departments get started with a Magnascanner and there are now over 2500 in use throughout the world. Similarily, a Magnascanner is a most relevant choice for larger hospitals in need of an instrument with the highest resolution for diagnostic confirmation. A basic scanner like the Magnascanner is still the best device available for static-imaging applications by virtue of its very high resolution, large field of view, wide energy range, contrast enhancement, wide choice of focusing collimators, and modest cost.

None of this should imply that the Magnascanner is an untouched island in the stream of progress. Today's instrument is generations away from yesterday's. Note: (1) maximum scan speed has been increased from 200 cm/min to 500 cm/min; (2) detector can be positioned by a control on the detector head itself, and a ratemeter on the detector head facilitates and speeds location of "hot" and "cold" spots; (3) a new color photo recording system is available in addition to black and white photorecording, multicolor dot recording, and Teledeltos black dot recording; (4) push button energy window selection (in addition to manual selection) for the most common radioisotopes used in diagnosis.

And Now the Dual Magnascanner®—This instrument is essentially identical to the Magnascanner® 500 except that it has two separate opposed detectors which acquire information independently. AP and PA, or RL and LL rectilinear scans can be performed simultaneously. This capability minimizes the need for patient re-positioning and reduces the scanning time by half.

Further information is available—Please write for detailed information on the Magnascanner® 500 and the Dual Magnascanner to Picker Medical Products Division, 595 Miner Road, Cleveland, Ohio 44143. Please request file 235R.

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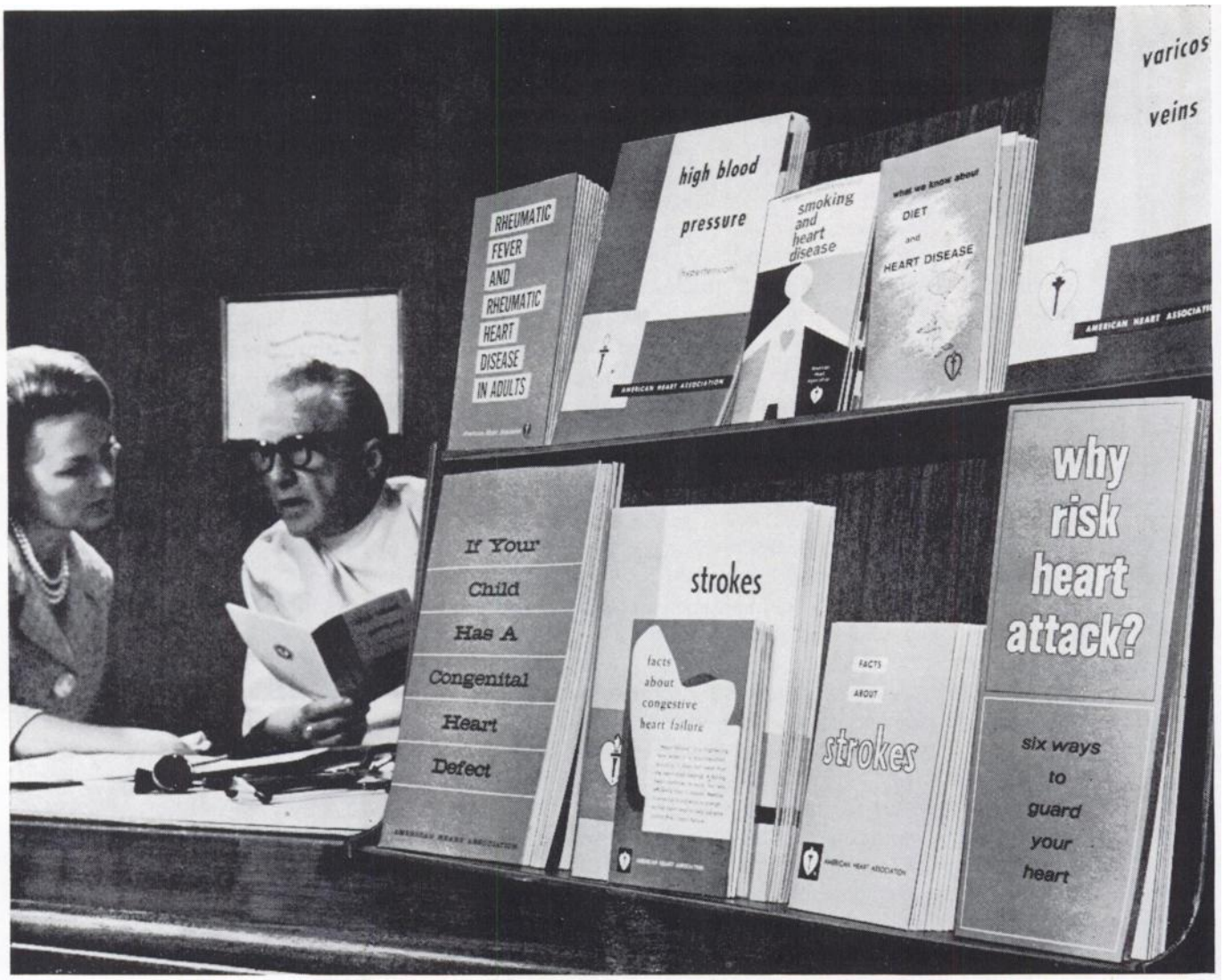
The "single source responsibility" company.



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Your patients and their families might have questions about the heart and blood vessel diseases. Your Heart Association has prepared a variety of pamphlets to assist you in answering their questions in simple non-technical language.

Produced under the guidance of leading cardiovascular specialists, these pamphlets deal with such subjects as heart attack, stroke, hypertension, rheumatic fever, congestive failure, inborn heart defects, varicose veins and other disorders. There are also pamphlets advising on risk factors related to heart attack, including persuasive arguments against cigarette smoking, and a fat-controlled, low-cholesterol diet plan for the general public.

Booklets on therapeutic sodium-restricted or cholesterol-lowering diets are also available on a physician's prescription only.

Ask your local Heart Association for a catalogue listing all these free materials and order a supply.

American Heart Association®

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POSITIONS OPEN

CHIEF TECHNOLOGIST WANTED: Challenging position available about Sept. 1, 1970 in Bridgeport, Conn. Equipment will include scintillation camera with on-line computer, twin probe scanner, liquid scintillation system, etc. Salary open. Send resume to: David Fischer, Administrator, Nuclear Facilities, Inc., 1401 Ocean Avenue, Brooklyn, N.Y. 11230 or call 212-252-7711.

PHYSICIAN WANTED: PHYSICIAN needed part time for ultra modern nuclear medicine laboratory in Bridgeport, Conn. Contact David Fischer, Administrator, Nuclear Facilities, Inc., 1401 Ocean Avenue, Brooklyn, N.Y. 11230 or call 212-252-7711.

RADIOBIOLOGY - CHEMISTRY - MEDICAL science: M.S.++, B.S., B.A. Graduate honors 3.6/4.0. Three years V.A. isotopes research. Academic research tumor cells. Honorably discharged. Desires medical/chemical research or fellowship U.S./Canada. Reply Box 801, Society of Nuclear Medicine, 211 E. 43rd St., New York, N.Y. 10017.

NUCLEAR MEDICINE TRAINEESHIP: 1 or 2-year program, University of Minnesota Hospitals Minneapolis, available immediately. Minimum prerequisites: I year clinical internship followed by 1 year residency training in internal medicine, radiology or pathology. Contact: Merle K. Loken, M.D., Professor of Radiology, Director, Division of Nuclear Medicine, University of Minnesota Hospitals, Minneapolis, Minn. 55455.

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A limited number of the KWIC Indexes for volumes 1-8 of the Journal of Nuclear Medicine are available from the Society of Nuclear Medicine, 211 E. 43rd Street, New York, N.Y. 10017. These indexes were prepared by the National Center for Radiological Health using the key-word method of indexing. Orders will be filled by the Society office free-of-charge on a first come, first served basis.

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Interested persons should address information requests and job descriptions to:

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Los Angeles, California 90007
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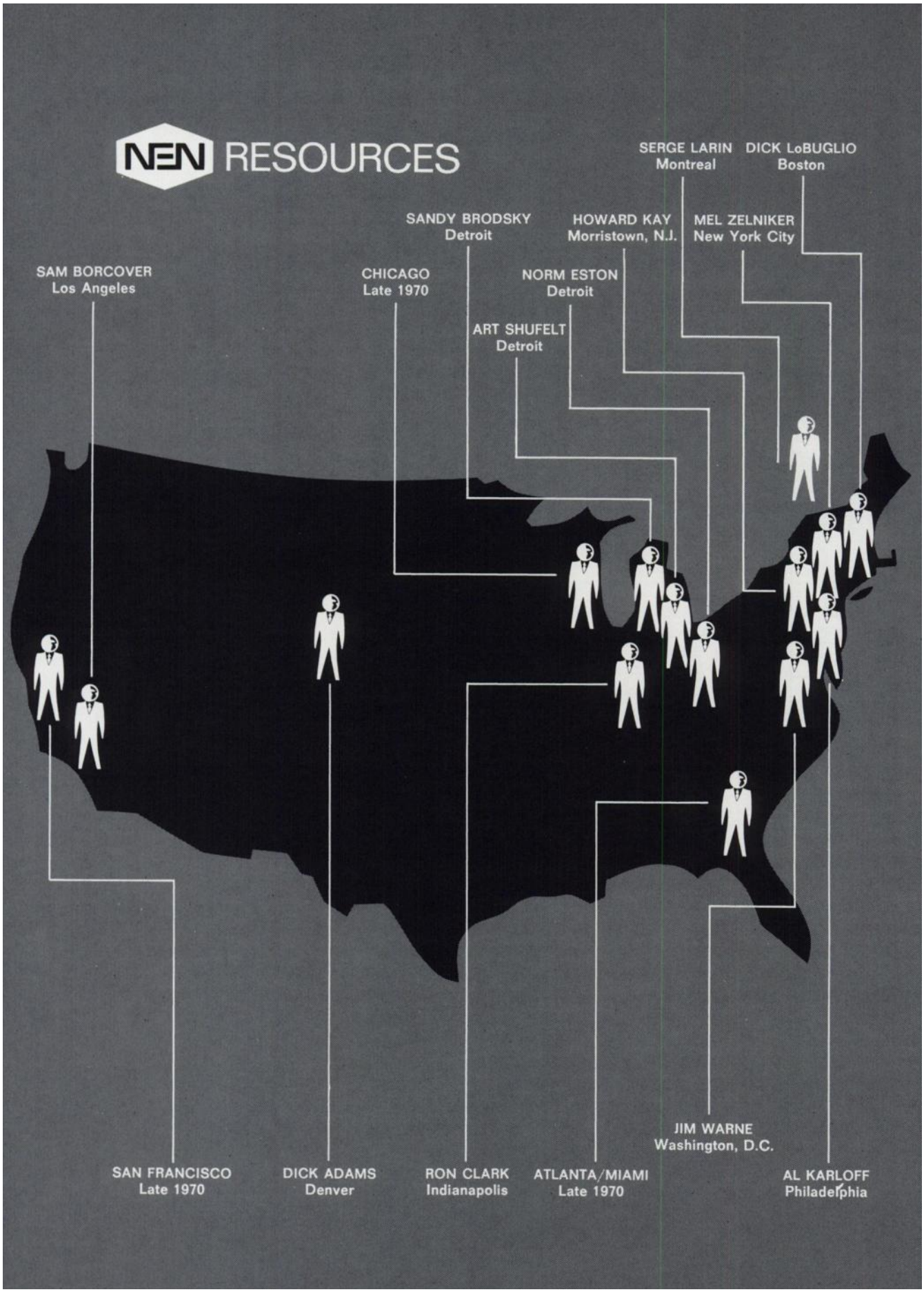
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When you're thinking of diagnostic ultrasound, only one name should come to mind.

Unirad. ▫ The Unirad 100 Series Echoscopes are the most sophisticated diagnostic ultrasound systems known. ▫ The 100 Series' trim, modular design provides a flexible system that can be tailored to fit your specific needs. ▫ Begin with a single transducer "A" Mode system. Then, by plugging-in additional modules, you can get Dual Transducer Triple Trace, Motion/ECG Mode and "B" Mode Compound Scanning. So you can change and add-on when your needs change. To keep your entire system current with all the latest developments. ▫ Standard features on the 100 Series are optional on other equipment. Like attenuators, for example. ▫ They're adjustable and calibrated in decibels for precise response. Patient to Patient. ▫ What's more, the 100 Series shows targets that are very close together. Like all of the third ventricle structures, for instance. Instead of a single, broad echo. And the 100 Series is so sensitive, it shows even the smallest targets. You can even measure ventricular diameters. ▫ The Unirad 100 Series Echoscopes. Modular. Sophisticated. And economical. Fill in the coupon, and we'll fill you in on all the facts.

A sound investment, for a sound diagnosis.

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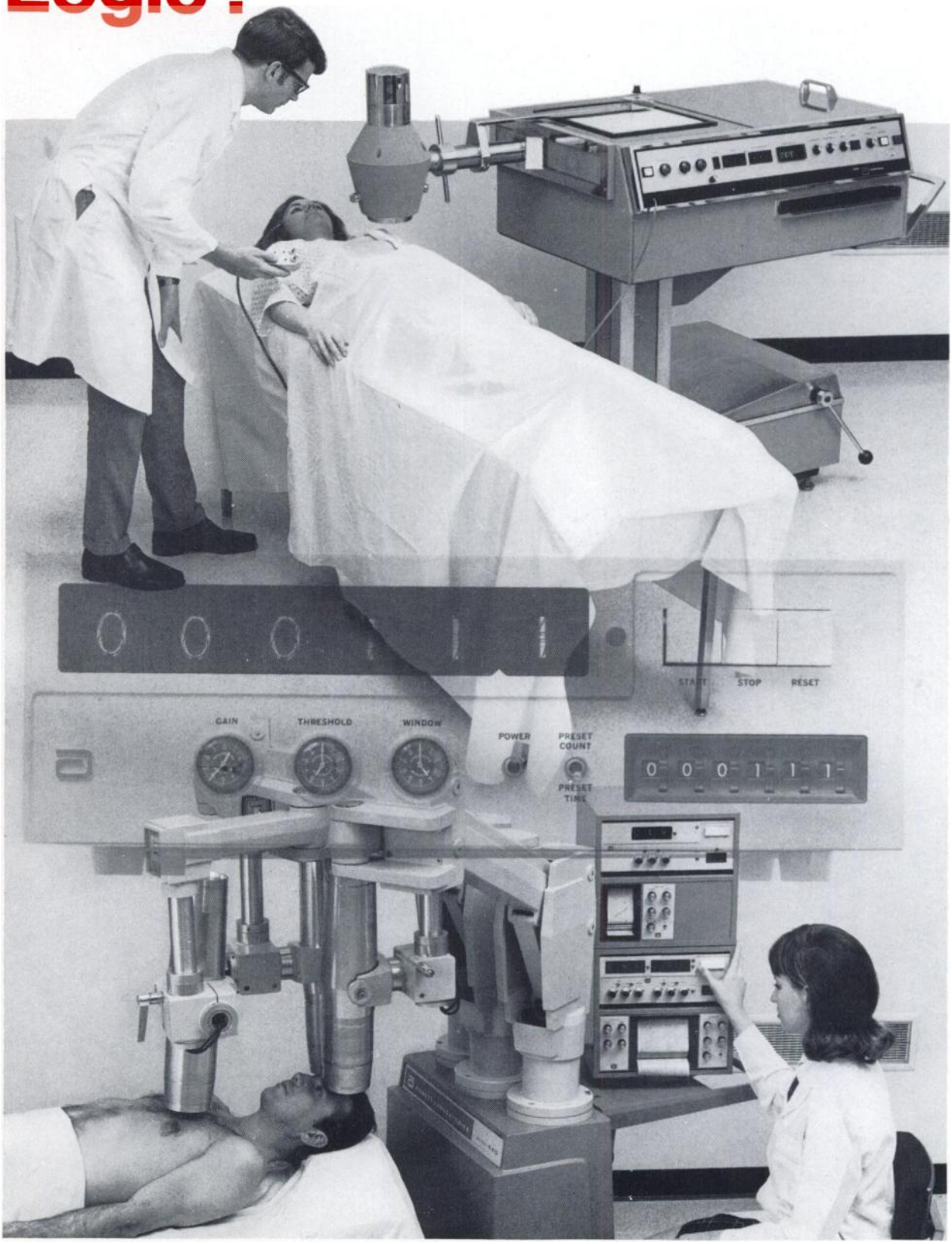
Graphic™! Dynamic™! Logic™!

To test, to "see" and to learn what goes on inside the patient!



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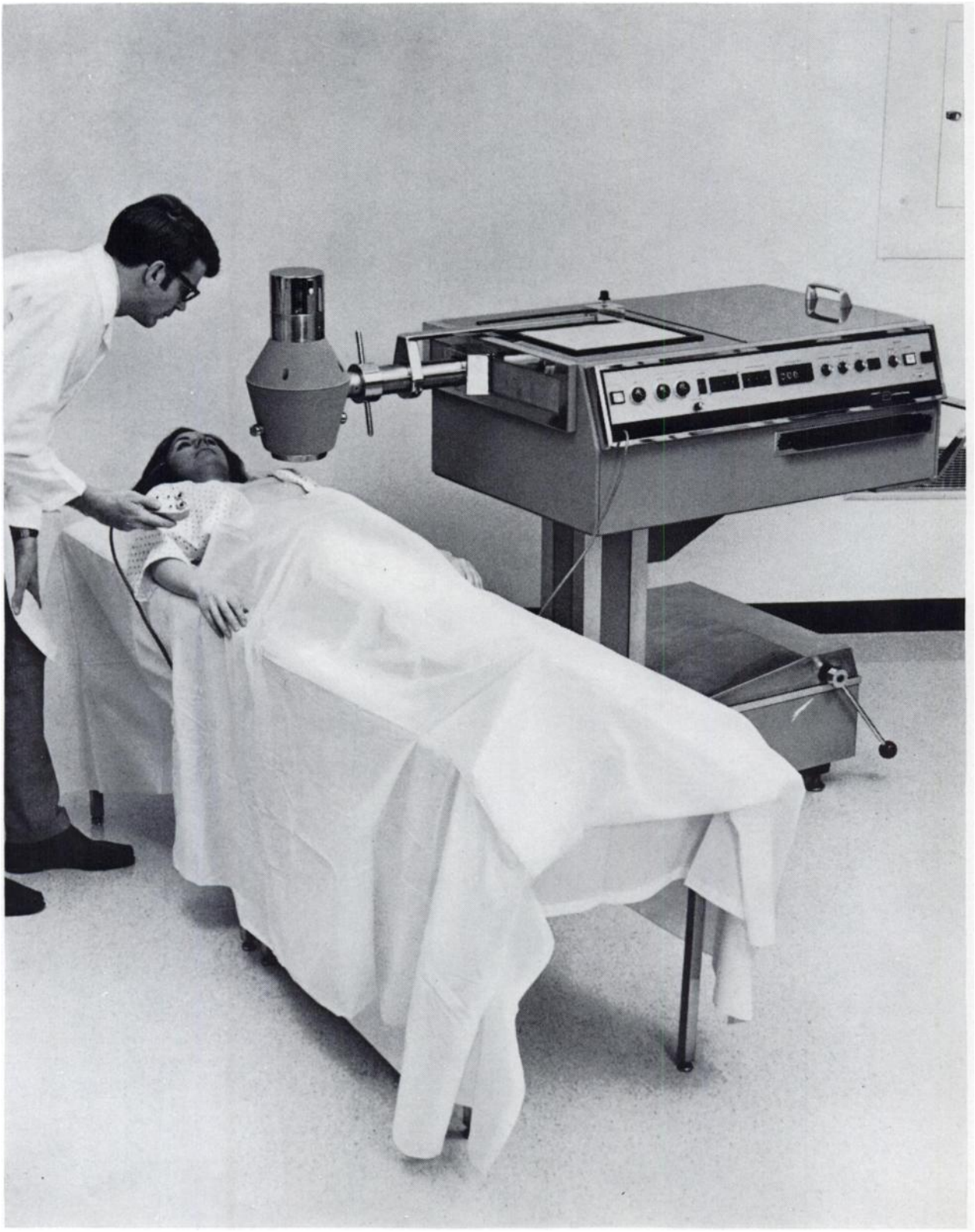

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Speed!
Portability!
Simplicity of Operation!

Scan speed ranges to 1,000 cm./min.

. . . variable from 10 to 1,000 cm./minute with appropriate fixed index level. 1,000 cm. minute makes it the fastest scanner available. Portal to portal patient time may be less with some studies than with camera devices.

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. . . system is readily portable and can be easily moved on its 5″ casters. Will fit through any standard door opening. It is the only scanner that can easily be taken right to the patient in his hospital bed.

Simple to operate

. . . technician can master scanner operation within 30 minutes. Remote control for detector positioning. Detector angle may be adjusted 360°.

Scan area 17″ either way

. . . 17″ x 14″ in either direction. Allows for easier patient set-up to scan large lung fields, liver, spleen, etc. Can scan 17″ laterally or horizontally (important in obese patients). Uses standard 14″ x 17″ x-ray film.

Convertible

. . . the Graphic is available with either a 3″ or a 5″ detector head. Can be converted easily in the hospital from a 3″ to a 5″ scanner.

Versatile

. . . five levels of contrast enhancement including digital mode and six levels of background erase.

Integrated circuitry

. . . allows fast, reliable photoscans in the shortest possible time with less instrument down time.

Ask about Abbott's unique service concept!

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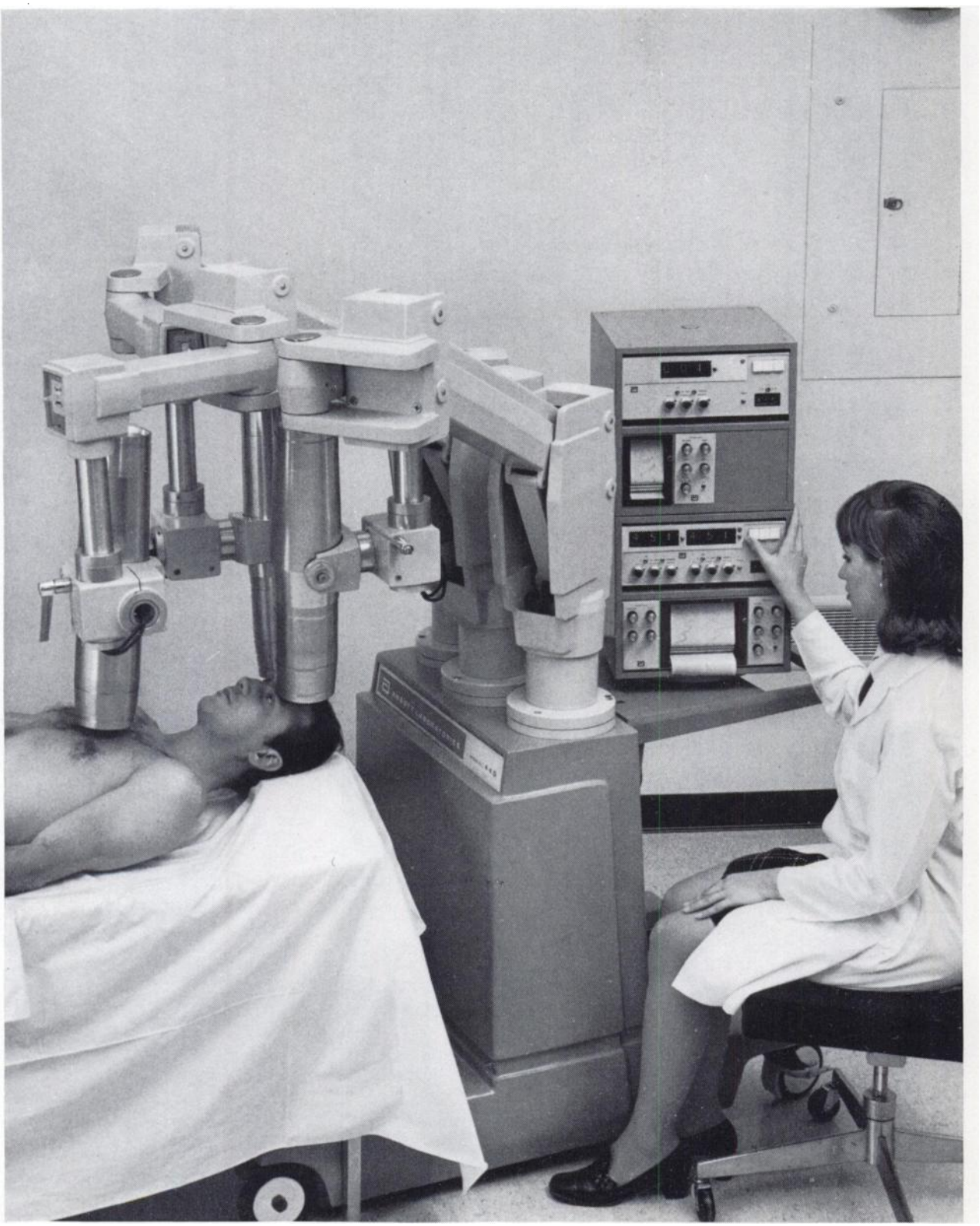

...to study the life systems!

Four chart speeds

. . . 0.1 millimeter/second, 1.0 millimeter/second, 10 millimeters/second, and 20 millimeters/second which are keyed to the circulation times relating to dynamic function studies of the important organs of the body. Included are the brain, lungs, heart, and kidneys.

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. . . the Dynamic system is entirely digital in operation.

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. . . this unique feature of the strip chart recorder assures you that no data will be lost. A Dynamic exclusive.

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. . . in each of the strip chart recorders eliminates the messy chore of ink changing. This prevents blurred information as well as smudged fingers.

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. . . of one, two, and three detector systems. 1.5 x 1.5 inch sodium iodide detectors mounted on electrically operated arms. This modular concept allows you to add on as your needs expand.

Logic...

...for in vitro and in vivo tests!

Radioisotope tests

. . . including T-3, T-4, thyroid uptake*, hepatic uptake*, plasma volume, fecal Rose Bengal excretion, iron binding, fat absorption, and placenta localization*.

Speed of electronics

. . . count and display in excess of 15,000,000 counts per minute.

Solid state integrated circuitry

. . . assures higher reliability; less down time.

Simple to operate

. . . minimum of controls with Direct Ratio Readout in %.

Choice of 3 models

. . . 101 and 111 have spectrometer and well in one instrument. The 121 has an external well.

Fast service

. . . with easy-to-use service manual; replacement boards in 24 hours. There's no waiting for servicemen.

Modular concept

. . . with built-in versatility. Protect your investment by adding components as the need arises.

*May be done by adding medical stand, external probe (shield and collimator).

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ABBOTT LABORATORIES North Chicago, Illinois 60064

Nuclear Instruments You Can Count On

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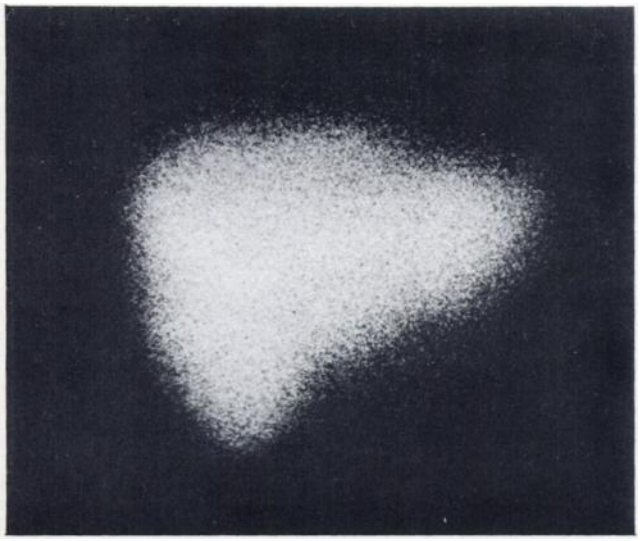
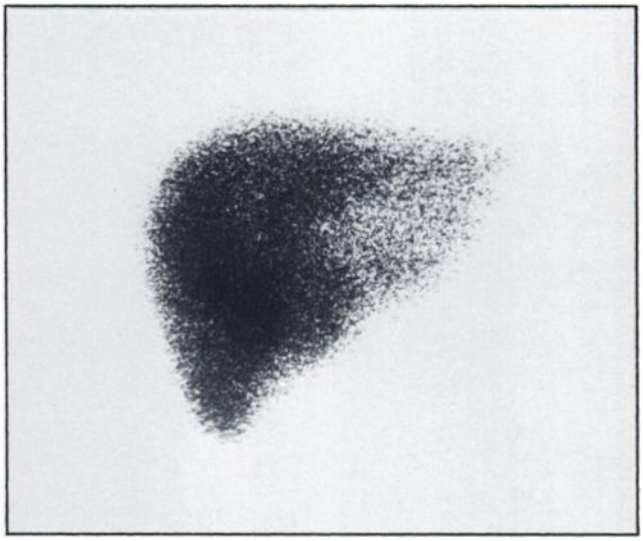
These photographs were taken simultaneously on a scintillation camera.

Which would you rather base your diagnosis on?

Polaroid Photograph



NMS 35mm Photograph



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Time-lapse photographic systems for medical recording

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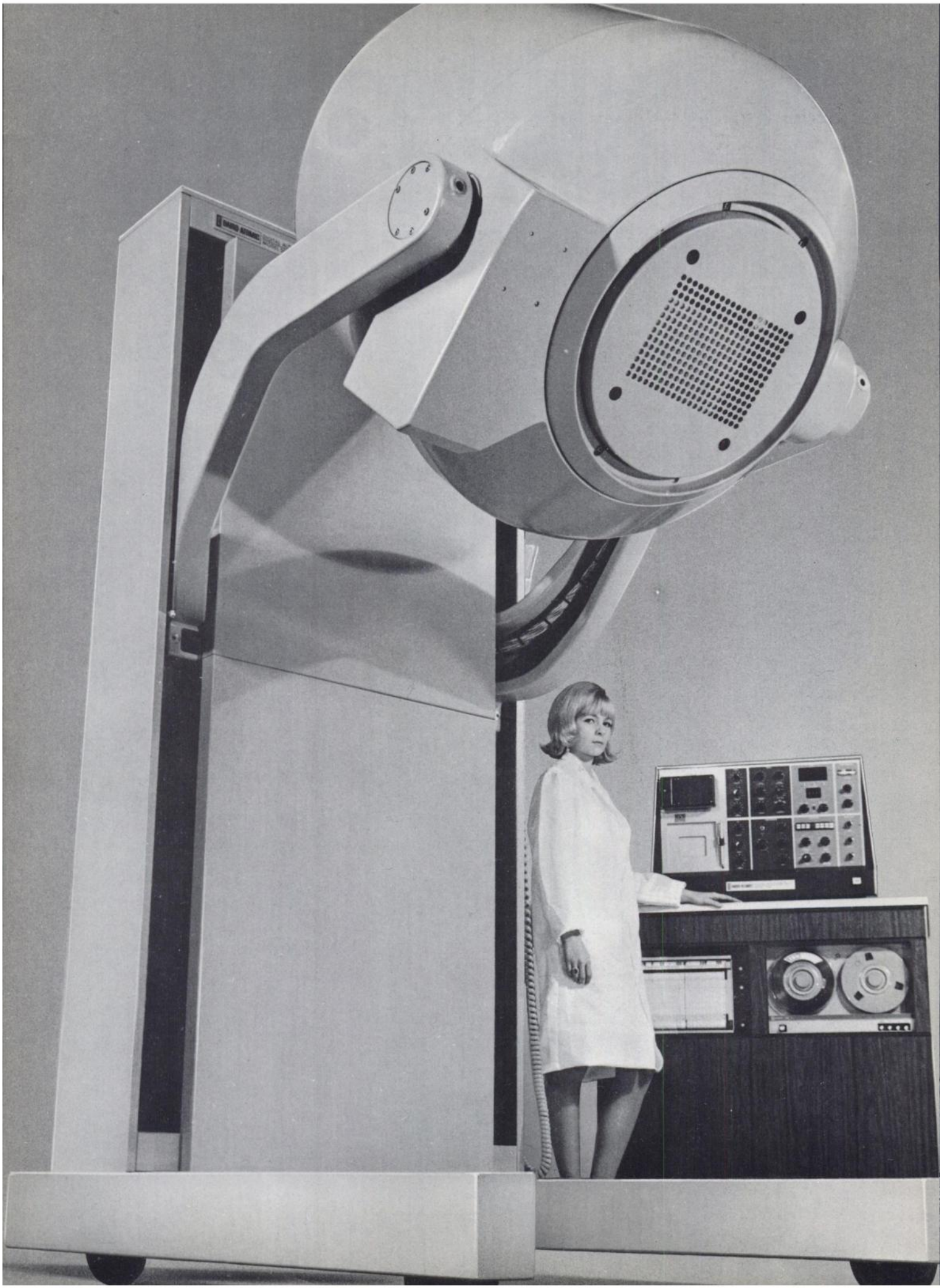

What is the ~~secret~~ Success behind the Baird-Atomic Scintillation Camera

The Autofluoroscope® has been perfected. Its ~~secret~~ success lies in the detector. Small individual crystals forming a rectangular 294 element matrix are positioned to collect data from that part of the patient's body opposite each crystal. Each crystal is tied electronically to its own magnetic core memory in the computer console, consequently it is the only scintillation camera specifically designed for quantitative imaging where discreet picture elements are collected and stored and may be manipulated for both visual observation and quantitative assessment at will. Send for Brochure. 125 Middlesex Turnpike, Bedford, Massachusetts 01730, Telephone: (617) 276-6200. Baird-Atomic Limited, Braintree, Essex. England Baird-Atomic (Europe) N.V., The Hague, The Netherlands.

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Up to now, whenever you read in the literature of a clinician using a "scintillation camera," the chances are it could mean only one thing. He was using *our* scintillation camera—the Nuclear-Chicago Pho/Gamma® III Scintillation Camera or one of its predecessors.

That fact prompts us to call Pho/Gamma III the most (if you will) experienced scintillation camera there is. And, as such, it's the instrument of choice for the in-vivo visualization of radioisotopes in body organs.

Note that we've given the current Pho/Gamma detector a significantly increased range of positioning. We've also improved the electronics and arranged everything to fit into a human-engineered desk console.

And, perhaps most importantly, no Pho/Gamma III will ever become obsolete. Because its performance can be continuously enhanced through an always-widening array of accessories. Recently added to this array are the Data-Store/Playback Accessory, the Super-8/Persistence Scope Accessory, and the CDS-4096 Clinical Data System. Which join the following accessories: 35-mm automatic time-lapse camera for sequential scintiphotos; dual-pen recorder/dual-channel ratemeter; Photo/Scope III attachment for 1-to-1 scintiphotos; and high-speed digital printer.

The proof of Pho/Gamma's experience is in the hands of your Nuclear-Chicago sales engineer. Please call him or write to us.

You'll find that we're the people who successfully marketed the first and, consequently, the most experienced scintillation camera—the Pho/Gamma III.

And experience, after all, is the best teacher. 0-215

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