a possible future for these grafts in both the arterial and venous systems.

In summary, no commercially available synthetic or biologic graft is adequate for venous replacement. We remain cautiously optimistic, however, that with significant improvements, collagen tube grafts may be of value in the future.

*Yasuko Tomizawa, MD, PhD
Marc R. Moon, MD
Department of Cardiothoracic Surgery
Stanford University School of Medicine
Stanford, CA 94305*

*Yasuharu Noishiki, MD, PhD
First Department of Surgery
Yokohama City University School of Medicine
Yokohama City, Japan*

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Reply to the Editor:

In their letter, Drs. Tomizawa, Moon, and Noishiki raised some criticisms regarding the results we have obtained with glutaraldehyde-treated ovine collagen grafts implanted in the inferior vena cava of pigs (*J THORAC CARDIOVASC SURG* 1991;102:440-7).

They noted that only two grafts were removed 28 days after operation and there were no explantations between 14 and 28 days. They concluded that our findings may not precisely depict the phenomenon of graft endothelialization. However, the exact definition of the period during which ovine collagen grafts were completely endothelialized in growing pigs has little clinical concern. Great differences exist between human beings and experimental species with regard to the healing of vascular grafts. In particular, it has been suggested that 1-month results with the prosthesis in pigs may be considered to correspond to 3-month prosthesis results in the dog and 21-month results in human beings. Further, human beings have limited capacity for development of a complete endothelial lining. Data in the growing pig may thus be useful only as preliminary and general indicators of the prosthesis' potential. Because results cannot be extrapolated to human beings, chronologic elucidation of the endothelialization phenomenon did not seem essential.

Similar considerations could be applied to the interesting suggestion of using a staining method specific to endothelial

cells. In our article, we always called the cells covering the inner graft surface "endothelium-like cells," never "endothelial cells".

Tomizawa, Moon, and Noishiki also discussed our early findings after implantation. One hour after blood contact, multiple areas of thrombus deposition have been observed on the exposed Dacron polyester fibers of the ovine collagen prostheses. Three possible explanations of this phenomenon have been proposed by Tomizawa, Moon, and Noishiki: (1) The graft was not strong enough to withstand injuries during preparation. (2) The graft could not tolerate blood pressure. (3) The graft was extremely thrombogenic. Because fibrin deposition was limited to defects in the inner collagen layer (exposing the underlying Dacron polyester fibers), graft surface thrombogenicity cannot explain inner thrombus formation. We assumed that the intimal graft defects were caused by the thinness and inadequate mechanical strength of the inner collagen cover, making it easily damaged by handling and manipulation during implantation. Accordingly, a new ovine collagen prosthesis with improved structural characteristics was developed. A thicker inner tissue layer was obtained without changing the graft's biophysical properties. We tested the new biosynthetic graft in the inferior vena cava of growing pigs, according to the same experimental protocol described in our previous article. One hour after implantation, neither disruptions of the inner graft components nor fibrin deposits were found. These findings confirmed the following statements: (1) The intact intimal graft surface was not thrombogenic. (2) The inner layer defects were traumatic in nature. (3) The defects were due to a structural deficiency. Despite such improvements, however, long-term patency of the newer grafts was not superior to that of the older ones. The reason for these late failures remained unclear.

Because Tomizawa, Moon, and Noishiki pressed us to discuss this subject, we state that, under microscopic examination of both types of failed grafts, the most remarkable finding was uniform mononuclear cell infiltration of the prosthetic wall. The widely known procoagulant activity exerted by white blood cells may support the immunologic hypothesis for long-term thrombosis of either the older or the newer ovine collagen grafts. Variable degrees of intimal hyperplasia were also observed in the failed grafts. Whether intimal hyperplasia depends on the immunologic response intensity remains to be investigated. Our results further emphasize the importance of Tomizawa, Moon, and Noishiki's suggestion to use alcohol instead of glutaraldehyde for ovine collagen tube treatment. A greater reduction of the graft antigenicity (with maintenance of hydrophilic properties) could make ovine collagen tubes a more reliable venous substitute.

*Giovanni B. Ratto, MD
University of Genoa
Viale Benedetto XV
16132 Genoa, Italy*

The New York Society for Thoracic Surgery: Seventy-five years, 1917-1992

To the Editor:

On February 20, 1917, in prescient recognition of thoracic surgery as a newly emerging specialty area of surgical endeavor, Dr. Willy Meyer (Fig. 1) of New York City convened a meeting in his office for the dual purpose of founding a New York Society for Thoracic Surgery and creating a national

Fig. 1. Willy Meyer, MD, 1855 to 1932, founder. (From Founding of the American Association for Thoracic Surgery; published with permission of the AATS.)

Fig. 2. Samuel J. Meltzer, MD, 1851 to 1932, first president of AATS and developer of intratracheal insufflation anesthesia. (From Founding of the American Association for Thoracic Surgery; published with permission of the AATS.)

Fig. 3. Nathan W. Green, MD, 1917 to 1955, devised endotracheal tube with inflatable balloon for positive-pressure intratracheal insufflation. (From Founding of the American Association for Thoracic Surgery; published with permission of the AATS.)

Table I. Charter members, New York Society for Thoracic Surgery, 1917

<i>Name</i>	<i>Institution</i>	<i>Specialty</i>
John Auer	Rockefeller	Physiology
Kenneth Bulkley	Bellevue	Surgery
Eugene W. Caldwell	Presbyterian	Radiology
Armistead C. Crump	Presbyterian	Endoscopy
Max Einhorn	German*	Internal Medicine
Hermann Fischer	German*	Surgery
Nathan W. Green	St. Luke's	Surgery
Henry H. Janeway	Memorial	Surgery
James H. Kenyon	Babies	Surgery
Adrian V. S. Lambert	Presbyterian	Surgery
Howard Lilienthal	Mount Sinai	Surgery
William H. Lockett	Bellevue	Surgery
Walton Martin	St. Luke's	Surgery
Samuel J. Meltzer	Rockefeller	Physiology
Willy Meyer	German*	Surgery
Martin Rehling	German*	Surgery
William H. Stewart	German*	Radiology
Franz J. A. Torek	German*	Surgery
Martin J. Ware	Mount Sinai	Surgery
Sidney Yankauer	Mount Sinai	Endoscopy
Alexis Carrell	Rockefeller	Surgery
John H. Hartwell	Bellevue	Surgery
Charles A. Dowd	Roosevelt	Surgery
Abraham O. Wilensky	Mount Sinai	Surgery
William Branower	Mount Sinai	Anesthesiology

*Soon renamed Lenox Hill.

Fig. 8.—Outside view of universal differential pressure chamber (first experiment).

Fig. 9.—Inside view of universal differential pressure chamber (first experiment).

Fig. 4. Universal differential pressure chamber (Sauerbruch-Meyer). (From JAMA 1909;53:1978-87; published with permission.)

association. This concept had been germinating for several years.

The original 25 founders of the New York Society—note that it was *for* thoracic surgery, not *of* thoracic surgeons—represented such specialties as radiology, endoscopy, physiology, anesthesiology, and internal medicine, as well as thoracic surgery (Table I).

With the New York Society as a nucleus, Willy Meyer invited surgeons and other individuals in chest-related fields from

Fig. 5. Intratracheal insufflation apparatus (Meltzer and Auer). (From *Founding of the American Association for Thoracic Surgery*; published with permission of the AATS.)

around the country to a luncheon at the Waldorf-Astoria Hotel in New York on June 7, 1917, to form The American Association for Thoracic Surgery (Table II). New Yorkers constituted 70% of the charter group.

Dr. Samuel J. Meltzer (Fig. 2), internist and experimental physiologist, was elected the first president, with Willy Meyer as vice-president and Nathan Green (Fig. 3) as secretary-treasurer. All were New York Society founders.

A clue as to why Meltzer, not Meyer, was elected president can be found in the fiftieth anniversary address to the AATS (held in New York in 1967).¹ Dr. Frederick Kergin of Toronto, AATS president, commented as follows:

That he [Meltzer] was elected President instead of Meyer was certainly the result of a very generous gesture on Meyer's part. This was perhaps to make amends for a dispute which they had had some years previously before the New York Academy of Medicine regarding the relative merits of negative pressure anesthesia as exemplified by the Sauerbruch differential pressure chamber [Fig. 4] which Meyer had used at the Lenox Hill [then German] hospital, and Meltzer's intratracheal insufflation. Meyer argued that this method might be satisfactory for healthy dogs but could be dangerous for sick human beings. A refreshing feature of the meetings of those days was that the participants really spoke their minds.¹

FIG. 446.—The Elsberg apparatus for intratracheal insufflation anaesthesia

Fig. 6. Intratracheal insufflation apparatus (Elsberg). (From *Founding of the American Association for Thoracic Surgery*; published with permission of the AATS.)

Fig. 7. Howard Lilienthal, MD, 1861 to 1946, performed first open thoracotomy on human being with intratracheal insufflation in 1910. (From *Founding of the American Association for Thoracic Surgery*; published with permission of the AATS.)

Table II. *New York charter members, AATS, 1917*

John Auer
Edward R. Baldwin*
Walter M. Boothby*
William Branower
Harlow Brooks
Lawrason Brown*
Kenneth Bulkley
Alexis Carrel
Armistead C. Crump
Charles V. Dowd
Max Einhorn
Hermann Fischer
Albert H. Garrin*
Nathan W. Green
John R. Hartwell
George J. Heuer
Henry H. Janeway
James H. Kenyon
Adrian V. S. Lambert
Howard Lilienthal
William H. Lockett
Walton Martin
Leo S. Peterson*
E. S. McSweeney
Samuel J. Meltzer
Willy Meyer (founder)
Martin Rehling
William H. Stewart
Franz Torek
Martin W. Ware
Abraham U. Wilensky
Sidney Yankauer

*Upstate New York.

Fig. 8. Alexis Carrel, MD, 1873 to 1944, Nobel laureate. (From *Founding of the American Association for Thoracic Surgery*; published with permission of the AATS.)

Meltzer's presidential address to the first meeting of the AATS in Chicago on June 10, 1918, focused on the intratracheal insufflation technique (Fig. 5), which he and his son-in-law, John Auer, had developed at the Rockefeller Institute.² This technique had been used clinically with success by Charles Elsberg³ (Fig. 6) and Howard Lilienthal⁴ (Fig. 7) at the Mount Sinai Hospital in New York since 1910.

At the same AATS meeting, Meyer vainly defended the term *chamber*, but referred prophetically to the surgery of the heart and great vessels as "music for the future."

Other papers presented included three on the Carrel-Dakin treatment of empyema. Some empyemas were even sterilized and successfully closed—an amazing forerunner of the Clagett procedure.

Alexis Carrel (Fig. 8) had already been awarded the Nobel Prize in 1912 for his work on vascular suture and transplantation. With World War I in progress, he teamed up with Henry D. Dakin, a British biochemist working in the United States. Their efforts vastly improved the treatment of horrible, infected war wounds, including empyemas.

On October 1, 1966, the *New York State Journal of Medicine*, under the title "A Diadem Added," saluted their distinction of being named the publisher of the Proceedings of the New York Society:

The New York Society for Thoracic Surgery will be 50 years old next February 1967 and it is said to be the oldest organization of its kind in existence.

This honorable society is now in the forefront of the bold new surgery of the cardiovascular and respiratory systems.

It is a long way from phrenic crush and intrapleural pneumonolyses to replacement of cardiac valves, but the Society has been in step all the way.⁵

And now, as it shares 75 years of existence with the AATS, the Society is paying attention to problems of medicosocial responsibility as well as thoracic surgical problems by acting as a forum for the discussion of malpractice, house staff working conditions, and quality control in cardiac surgery.

In conclusion, let me acknowledge our indebtedness to the late Dr. Lawrence Miscall and his fiftieth anniversary committee for the historical material painstakingly gathered and preserved in

a bound, richly illustrated volume⁶; to Dr. Allan Bloomberg, who edited the proceedings for the *New York State Journal of Medicine*; and to Dr. George Robinson and the current officers of the New York Society, for additional archival material.

I take humble pride in being a member of both the New York Society and the AATS, and appreciate the opportunity to share their history with you.

Paul A. Kirschner, MD
Clinical Professor of Surgery
Chief, General Thoracic Surgery Division
Mount Sinai Medical Center
New York, NY 10128

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Right pneumonectomy syndrome: Surgical correction with expandable implants

To the Editor:

Postpneumonectomy syndrome, a rare complication of right pneumonectomy, causes cough and exertional dyspnea because of progressive mediastinal shift, with compression of the left main stem bronchus by the vertebral column. We recently successfully treated a severe case by implanting expandable double-lumen permanent breast prostheses into the empty right pleural cavity to reposition the mediastinum in the thoracic midline.