Vascular surgery in Russia has a particularly rich history. Many pioneering surgeons have made contributions to this speciality that is now practised on a high level throughout Russia. Until the beginning of the 20th century, the ligation of major blood vessels was the most frequently practised operation for trauma and disease of the blood vessels. The first direct vascular anastomosis, of the portal vein and the inferior caval vein was performed and described in 1877 by the outstanding surgeon and physiologist, Nikolai Ekk. This achievement was important in that it challenged the contemporary belief that any repair of blood vessels with a suture was inevitably followed by thrombosis. After this landmark effort that indeed influenced contemporary thinking not only in Russia but throughout the medical world, reports on successful reconstructions of traumatised arteries soon began to appear in the late 19th and early 20th century.

However, these developments were not believed to be of benefit by everybody; at the 14th Russian surgical congress after K.M. Sapezkh found in favour of attempting arterial repair, the congress chairman N.A. Velyaminov said, “It is better to let one wounded man die who could have been saved with a suture than ten thousand wounded to die of unreceived care because of wasted time spent on the intricate work of suturing vascular walls”. Nevertheless, vascular injuries were increasingly repaired, with the brave operation of Yu. Yu. Dzhanelidze, who was the first surgeon in the world to suture a stab wound of the thoracic aorta.

Another frequently encountered vascular catastrophe for which direct vascular treatment was attempted as early as 1895 was arterial embolism and the Russian surgeon Sabaneev deserves the credit for this first attempt. However, it was in the 1930s that regular success of embolectomy was recorded by Vreden, later followed by others influencing progress far across the Russian borders. Thomas Fogarty’s invention of the embolectomy balloon catheter in 1963 made a great difference in the treatment of acute embolism and this device soon came into general use in Russia as well. In chronic peripheral arterial occlusions amputation long remained the primary treatment. The first replacement of a femoral artery by a saphenous vein was probably by Bogaraz in 1935, 13 years before Kunlin described his experience in France. This memorable feat was described by Filatow et al. in 1960. Other milestones on the path of Russian vascular surgery were the first application of cardio-pulmonary bypass in the 1920s and the world’s first vascular suturing apparatus in 1945. It is fair to say that these steps were of great significance for the advancement of medicine throughout the world.

The development of angiography commenced in the mid 1950s. At this time, the availability of vascular prostheses also became a frustration for most surgeons, except those working in one of the few well-funded and equipped hospitals. It was in these latter institutions that new and extensive procedures were usually performed. The in situ principle of vein grafting was applied in 1960 by Shalimov in the iliac as well as in the femoral artery segments. In this procedure the venous valves were excised from the iliac and femoral vein via multiple phlebotomies. Abdominal aortic reconstruction, either for occlusive or aneurysmal disease, using synthetic grafts commenced in 1959. In the beginning the Russian synthetic fibre “Lavsan” was used. The combination of...
Lavsan-Ptoraln for prostheses compares well with many foreign products, and is still being used today. For occlusive aortoiliac disease eversion endarterectomy was used occasionally. However, these procedures have not met wide acceptance, due to their traumatic nature and the long duration of the procedures.

Surgical treatment of renovascular hypertension by splenorenal bypass, aortorenal bypass and transaortic eversion endarterectomy was started in the sixties, while autotransplantation of the kidney was performed for the first time in 1975. In particular the transaortic eversion endarterectomy of the renal artery became quite popular. The author of this leading article conducted the first successful aortoceliacorenal bypass using a bifurcated conduit in 1968. The first successful embolectomy from the superior mesenteric artery for acute intestinal ischaemia was performed in 1961. Western surgical schools had an important influence on Russian vascular surgery, especially with regard to abdominal aortic branch reconstructions. Criteria for the patient selection and the operative strategy when multiple lesions were involved were adopted from these western institutions. However, the author of this editorial was the first to use a retroperitoneal thoracoabdominal approach to thoracoabdominal aorta and the visceral branches in 1962. This operative approach became quite popular in Russia and in many other countries was known as the "Russian access". In 1971 this innovative approach was used for a one-stage transaortal endarterectomy of the aorta, superior mesenteric and renal arteries and it became enthusiastically adopted elsewhere as well. The history of abdominal aortic aneurysm treatment in Russia followed a similar path to western countries, with induced thrombosis, techniques that involved wrapping of the aneurysm and after the mid-1950s total resection of the aneurysmal sac and graft replacement. For the last three decades, the inlay prosthesis has become the standard procedure for abdominal aortic aneurysm treatment throughout Russia. Application of hypothermia and later cardiopulmonary bypass enabled Russian surgeons to treat thoracic aortic and aneurysmal disease for the first time in 1962. In 1965 the first type III-B dissecting aneurysm was operated successfully by the author, using cardiopulmonary bypass. In 1981 the author also treated a similar case by implantation of an endoprosthesis without cardiopulmonary bypass. The world's first mammary-coronary anastomosis was performed in 1964 by Kolesov and the procedure had a striking success. Another world's first treatment was by Chazov and co-workers who successfully administered fibrinolysin into the coronary bed of a patient with acute myocardial ischaemia.

Vascular procedures for extracranial cerebrovascular occlusive disease in the 1950s and early 1960s were primarily performed in institutions for neurologic diseases. Later these operations became the domain of vascular surgeons.

Endovascular dilatations for obstructive arterial disease came into use in the second half of the 1970s. Laser angiosurgery came into use in Russia following the publication in 1984 from the Stanford University Medical Center. Further development of endovascular surgery resulted in the landmark procedure of Volodos, who performed the world's first "remote" endoprosthesis implantation of the aorta and iliac arteries. After the first nodulovenous anastomosis was performed as early as 1971, the surgical management of lymphoedema was taken further by the advent of modern optical systems and microsurgical instruments.

The achievements of many able and inspired individuals have created the basis for the strong position of vascular surgery that is encountered in Russia today.