

A Knowledge Sharing Initiative by Medanta

Four Medanta Doctors Counted Among World's Top 2% Scientists in Stanford University Ranking

Four distinguished doctors from Medanta – The Medicity, Gurugram, have been recognised in the prestigious Stanford University rankings of the top 2% of scientists in the world.

The rankings, compiled by Stanford University in collaboration with leading scientific publisher Elsevier BV, evaluate researchers based on standardised citation metrics, identifying the most impactful contributors across various scientific fields. The doctors who have been included in the 2024 Stanford-Elsevier ranking are: Dr. Yatin Mehta, Chairman, Institute of Critical Care and Anaesthesiology, Dr. Arvinder Soin, Chairman, Institute of Liver Transplantation, Dr. Manish Bansal, Senior Director, Clinical and Preventive Cardiology, Institute of Cardiac Care, Dr. Prashant Vilas Bhangui, Director, Institute of Liver Transplantation.

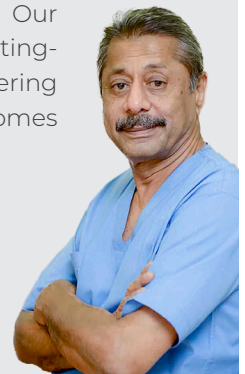
Dr. Naresh Trehan, Chairman and Managing Director, Medanta, said, "We are proud of all the doctors for their recognition on this esteemed list. Their dedication to advancing medical science and delivering high-quality patient care embodies Medanta's mission. Their achievement reinforces our status as not just a top-tier hospital but also a centre where cutting-edge medicine is practiced. Our focus remains on integrating cutting-edge technology and pioneering therapies to improve patient outcomes and healthcare experiences."

Jointly expressing their gratitude, Dr. Yatin Mehta, Dr. Arvinder S. Soin, Dr. Manish Bansal and Dr. Prashant Bhangui said, "We are honoured to be recognised in the Stanford University's prestigious ranking of global scientists. This acknowledgment reflects not just our individual efforts, but also the collective commitment of Medanta to foster a culture of research, innovation, and excellence in healthcare. As doctors, our primary focus remains delivering the best possible care to patients. It is immensely gratifying to see our work in advancing medical science recognised on a global stage. We share this achievement with the entire Medanta community, who continually inspire and support us in pushing the boundaries of medical knowledge."

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Dr. Naresh Trehan

Chairman and Managing Director
Medanta



Dr. Yatin Mehta



Dr. Arvinder Soin



Dr. Manish Bansal



Dr. Prashant Vilas Bhangui

A First in North India: Endovascular Aneurysm Repair with TREO AAA Endograft at Medanta Gurugram

Case highlights advantages of TREO endograft, impact of endovascular aortic repair and percutaneous technology on patient care

Abdominal aortic aneurysm (AAA) is an abnormal focal or diffuse dilatation of the abdominal aorta, typically involving the infra-renal segment, characterised by ≥ 1.5 times the normal aortic diameter (approximately a minimum diameter of 30 mm). If left untreated, there is an increasing risk of rupture with increasing size of the aneurysm. According to the current literature, one-year incidence of rupture significantly increases to 9.4% for aneurysms of 5.5cm to 5.9cm, >15% in aneurysms up to 6.9cm. Indications for definitive repair in patients with AAA include: symptomatic – intractable abdominal or back pain (Class I, Level C); ruptured AAA (Class I; Level C), maximum size >55mm (Class I, Level B), or maximum size 4-5cm with interval growth of >10mm/year (Class I, Level B).

The definitive management options for AAA include open surgical repair (OSR) and endovascular aortic repair (EVAR). EVAR has been the treatment of choice for patients with hostile abdomens, medical comorbidities or anaesthetic risks that contraindicate open surgery. Over the years the paradigm has shifted from open to minimally invasive endovascular-first approach. In the endovascular repair, there has been significant improvement in access, technology and the devices available.

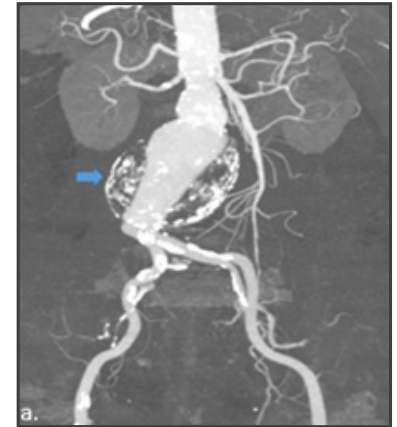
The Division of Vascular and Endovascular Sciences at Medanta Gurugram, recently achieved a significant milestone by successfully performing the first-ever endovascular aneurysm repair (EVAR) using the TREO Abdominal Aortic Aneurysm Endograft from TERUMO.

This case report highlights the procedure, the advantages of the TREO endograft, and the transformative impact of incorporating EVAR and percutaneous technology on patient care.

Case Study

A 67-year-old male patient with a history of hypertension and hyperlipidaemia, and complaints of intermittent pain in the abdomen was evaluated in his native country

using CT angiography and diagnosed with a large infrarenal abdominal aortic aneurysm (AAA) with maximum dimensions of approximately >6.2cm in diameter. The patient was asymptomatic on presentation but had a significant risk of rupture due to the large size of the aneurysm, necessitating repair.



Large infra-renal abdominal aortic aneurysm (blue arrow) with extensive atherosclerotic changes.

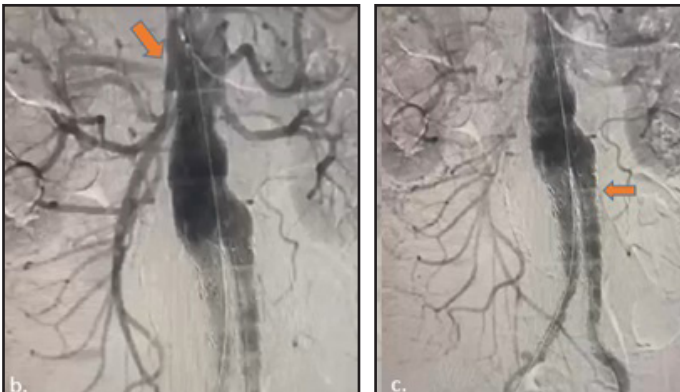
In the current patient, considering the patient's age and comorbidities, a minimally invasive EVAR approach was preferred over traditional open surgical repair. A decision was made to proceed with EVAR using the TREO Abdominal Aortic Aneurysm (AAA) Endograft. The procedure was performed under local anaesthesia with conscious sedation. Access was gained percutaneously via the common femoral arteries using the ProGlide® closure system.

The TREO AAA device is the latest device introduced with enhanced flexibility, dual-level fixation and ease of deployment. It was introduced and accurately positioned under fluoroscopic guidance. The aneurysm was successfully excluded and the procedure was completed without any intraoperative complications. Post procedure, the percutaneous access sites were closed using the ProGlide® system, eliminating the need for open surgical cutdowns. The patient was monitored in the recovery area for a few hours before being discharged on the same day.

Discussion

This case highlights the percutaneous endovascular management of a patient with abdominal aortic aneurysm resulting in successful exclusion of the aneurysm with excellent and rapid recovery. The advantages of EVAR have already been well established due to its minimally invasive nature compared to open surgical repair, making it a preferred treatment for AAA.

According to evidence in the existing literature, there are no significant differences in the 30-day mortality



b and c: Post stent-graft angiogram with good flow through chimneys.

rates between OSR and EVAR, 10-year survival, or 10-year freedom from re-intervention rates.

	EVAR	OSR
Mortality (30 days)	0%	2%
Survival (10 years)	79%	70%
Freedom from re intervention (10 years)	81%	74%

Overall re-intervention rates after EVAR have been reported to be approximately up to 25% after five years, which establishes that EVAR seems to be a reasonable method to treat infrarenal abdominal aortic aneurysms regardless of age when anatomical criteria are met. Although the previous literature leaned toward OSR for younger, medically good-risk patients. Based on the overall risk and benefit, it may change to EVAR, especially for men.

This case also brings to the foreground the latest advancement in endovascular technology – TREQ endograft. This new stent-graft has been designed to allow for precise deployment, dual level fixation and effective aneurysm exclusion, especially in angulated neck anatomy, reducing the risk of endoleaks and improving long-term outcomes. The minimally invasive nature of EVAR, coupled with the flexibility and accuracy of the TREQ device reduce the risk of complications such as bleeding, infection, and respiratory issues, which are more common in open surgery.

Traditionally, patients undergoing open AAA repair required a week-long stay in the ICU, followed by an extended hospital stay. With EVAR and the TREQ endograft, patients can now be treated as day-care cases, drastically reducing the recovery period and allowing for a quicker return to normal activities.

The use of ProGlide® closure system has brought about a huge impact in the percutaneous technology

as it enables percutaneous access and closure of the femoral artery, further reducing the invasiveness of the procedure. This technology eliminates the need for surgical cutdowns, reducing operative time, minimising scarring, and decreasing the risk of wound complications. Percutaneous vascular closure devices are ideally suited for patients with non-calcified access arteries.

The combined use of EVAR and percutaneous access technology has transformed the management of AAA from a high-risk, ICU-dependent surgery to a day-care procedure. Patients now experience minimal discomfort, shorter hospital stays, and reduced healthcare costs.

Conclusion

The first implantation of the TREQ Abdominal Aortic Aneurysm Endograft at Medanta Gurugram marks a significant advancement in the treatment of AAA. The combination of EVAR with percutaneous technology, particularly the use of the ProGlide® closure system, has not only improved patient outcomes, but revolutionised the management of this life-threatening condition and also shortened hospital stay, thereby reducing cost. This case exemplifies how modern endovascular techniques can enhance the quality of care, making complex procedures safer, more efficient, and accessible to a broader patient population.

Dr. Rajiv Parakh

Chairman - Peripheral Vascular and Endovascular Sciences
Medanta Gurugram



Dr. Tarun Grover

Director - Peripheral Vascular and Endovascular Sciences
Medanta - Gurugram



Dr. Virender Sheorain

Associate Director - Peripheral Vascular and Endovascular Sciences
Medanta - Gurugram



Dr. Avichala Taxak

Associate Consultant - Peripheral Vascular and Endovascular Sciences
Medanta - Gurugram



Medanta@Work

Timely Surgical Intervention Saves Patient with Complex Thyroid Nodule

A thyroid nodule is defined as a discrete lesion in the thyroid gland which is radiologically distinct from the surrounding parenchyma. Although its prevalence increases with age, the increase in both prevalence and incidence over the last few decades is attributed to the widespread use of ultrasound imaging of the neck and increased awareness among patients and healthcare providers. Not all thyroid nodules are cancerous and the incidence of malignancy ranges from 10%-15%.

Thyroid cancer is the most common endocrine malignancy, accounting for 2.1% of all cancers diagnosed worldwide. Around 90% of thyroid cancers are differentiated thyroid cancer, ~5% are medullary thyroid cancer, poorly differentiated thyroid cancer and anaplastic thyroid cancer constitute <2%, 1%-3% lymphomas and <1% are other rare tumours like a sarcoma. Amongst differentiated thyroid cancers, papillary thyroid cancer (PTC) comprises 80%-85% of the cases, followed by follicular thyroid cancer (FTC) 10%-15%.

In the past few years, non-surgical methods have come up for the management of thyroid nodules and cancers, including radio-frequency ablation, microwave ablation and alcohol ablation. However, not all cases are eligible for such techniques, which require skill and experience but most importantly correct patient selection.

Here, we describe a case wherein a patient with a thyroid nodule was referred to Medanta Lucknow for radio-frequency ablation and was not diagnosed as malignancy on biopsy or fine needle aspiration cytology.

Case Study

A 32-year-old woman was referred to the Department of Interventional Radiology at Medanta Lucknow for radio-frequency ablation of a 5.2cm right solitary thyroid nodule (TIRADS-2 on Ultrasonography, Figure 1) where ultrasound-guided diagnostic biopsy was done basis which it was reported as a papillary thyroid lesion



Figure 1: Pre-operative Right STN; Figure 2: Right hemithyroidectomy specimen with attached central compartment lymph node with right SLND (Levels II, III, IV, VA)

without nuclear features of papillary carcinoma. Further, USG-guided fine needle aspiration cytology was done, which reported it as Bethesda Category-III, also known as atypia of undetermined significance (AUS).

After further evaluation in our Endocrinology Department, the patient was referred to the Department of Endocrine and Breast Surgery for surgical management. The patient was planned for right hemithyroidectomy with frozen section biopsy of the lobe as well as lymph nodes in view of the short history and recent increase in size.

After adequate preoperative evaluation, the patient was taken up for surgery in view of suspicious cytology as the ultrasound-guided biopsy features were suggestive of papillary thyroid carcinoma.

Intra-operatively right lobe was grossly enlarged along with multiple enlarged lymph nodes in right central and lateral compartments.

Frozen section analysis of the right lobe revealed that the entire lobe had been replaced by papillary thyroid carcinoma while the lymph node in the right lateral level II was reported as positive for malignancy. However, the lymph node from the left lateral compartment was reported as negative for malignancy. So, finally the surgery performed was total thyroidectomy with bilateral central and right lateral (Levels II, III, IV, VA) compartment lymph node dissection (Figure 2).

Post operatively, the patient had normal voice and was able to accept liquids on the evening of the day of the surgery. However, the patient developed biochemical hypocalcemia on post-operative Day 1 and it was managed with intravenous calcium boluses and oral calcium and vitamin D supplements. The patient was discharged on post-operative Day 3 with a calcium level of 8.5mg/dl on calcium and vitamin D supplements.

Histopathology showed right lobe papillary thyroid cancer (classical type) of size 7.5x4.5x4cm without any

capsular or vascular extension; 10/16 central compartment lymph nodes and 12/26 right lateral compartment lymph nodes were positive for malignancy.

The stage-3 cancer patient was planned for whole body radio iodine, scanned and therapy.

Discussion

Classical papillary thyroid cancer tends to have an indolent clinical course and occurs in iodine sufficient areas. Male-to-female ratio is 3:1 with the mean age of presentation being 34-40 years. Although children and adolescents are more likely to have an advanced disease at the time of diagnosis—80% have nodal metastasis and 15%-20% have pulmonary metastasis—they generally have excellent outcomes. Papillary thyroid cancer can be multifocal and spread via lymphatic route and clinically palpable cervical lymph nodes are there in approximately one-third of patients at the time of presentation.

The initial evaluation of a thyroid nodule consists of thyroid-stimulating hormone (serum TSH), ultrasound neck and fine needle aspiration cytology.

Histologically, papillary thyroid cancer is characterised by well-formed papillae with fibrovascular core and distinct nuclear features including nuclear grooving, pseudo inclusions, indentations.

Total thyroidectomy with removal of the involved lymph nodal compartment (selective lymph node dissection) is considered to be the treatment of choice for papillary thyroid cancer as they are generally bilateral (30%-85%) and multifocal (>30%) and also so that thyroglobulin (Tg) could be monitored for recurrence during follow up.

The use of adjuvant radioactive iodine (RAI) therapy is indicated in the American Thyroid Association (ATA) risk stratification system and can be considered in ATA intermediate-risk tumours.

Non-surgical methods for the management of thyroid nodules are only used for benign tumours. However, radio-frequency ablation, microwave ablation and alcohol ablation are indicated in small cystic nodules, small toxic nodules, proven low-volume lymphadenopathy in patients who have already undergone surgery and RAI for thyroid cancer, older patients/patients with comorbidities which preclude surgery and palliation of a patient who has a visible/palpable lymph node.

Even with these procedures, the success and recurrence rates for benign nodules is variable in different studies with specific, known complications for each procedure.

Non-surgical methods for thyroid nodule management, while valuable in certain scenarios, require meticulous patient selection to prevent potential undertreatment of malignancies

Conclusion

Our case illustrates the pitfalls of adopting non-surgical management for solitary thyroid nodules without appropriate patient selection. If radio-frequency ablation had been performed, it would have resulted in sub-optimal treatment of the thyroid nodule, leaving behind disease in the central and lateral neck.

This case highlights several key learning points for managing thyroid nodules. It underscores the critical importance of thorough preoperative evaluation, including comprehensive imaging and cytology, in guiding treatment decisions.

Furthermore, it demonstrates that intraoperative findings can significantly alter the surgical approach, emphasising the need for flexibility and expertise in thyroid surgery. The case serves as a reminder that non-surgical methods for thyroid nodule management, while valuable in certain scenarios, require meticulous patient selection to prevent potential undertreatment of malignancies. Lastly, it reinforces the value of a multidisciplinary approach, involving endocrinology, radiology, and surgery, in achieving optimal patient outcomes.

These lessons are crucial for all clinicians involved in thyroid nodule management to ensure comprehensive care and appropriate treatment selection.

Dr. Amit Agarwal

Director - Department of Endocrine and Breast Surgery
Medanta - Lucknow



Dr. Roma Pradhan

Associate Director - Department of Endocrine and Breast Surgery
Medanta - Lucknow



CONGRATULATIONS



Celebrating
**75000+ Successful
Joint Replacement
Surgeries** at
Medanta - Gurugram
under the guidance of
Dr. Ashok Rajagopal,
Group Chairman,
Orthopaedics

Paediatric Epilepsy Care Clinic Launched in Lucknow as a Dedicated Centre for Specialised Treatment

Medanta Lucknow inaugurated its Paediatric Epilepsy Care Clinic, providing an innovative and specialised facility for children and adolescents afflicted with epilepsy. The ceremonial inauguration was graced by the presence of senior paediatricians Dr Sanjay Niranjn, Dr A C Chawla and Dr Rashmi Kumar underscoring the clinic's commitment to exemplary paediatric care.

The clinic focuses on the unique requirements of paediatric epilepsy, which often demands different approaches than adult-onset epilepsy, exhibiting more nuanced symptoms and genetic influences. The establishment is structured to offer thorough, long-term care, customised to the developmental needs of younger patients.

The new Paediatric Epilepsy Care Clinic at Medanta in Lucknow offers expert evaluations by paediatric neurologists, advanced diagnostics including EEG and video EEG monitoring, 3T MRI for detailed brain imaging, and genetic testing. Treatment options include medication management with anti-epileptic drugs (AEDs), ketogenic diet therapy and surgical interventions for drug-resistant epilepsy. The clinic also provides multidisciplinary support with a paediatric epilepsy care nurse, psychologists, therapists from the child development centre, and a dietician trained in epilepsy care.

The clinic also offers a dedicated video EEG lab, in-house genetic testing, specialised dietary therapy, and advanced 3T MRI and PET for surgery evaluations.

Dr Rakesh Kapoor, Medical Director at Medanta, Lucknow, said, "The Paediatric Epilepsy Clinic is an extension of



our commitment to providing cutting-edge healthcare. Epilepsy in children can have a profound impact on their development and with this clinic, we aim to give families access to world-class treatment options right here in Lucknow."

The dedicated team at the clinic includes Dr Richa Tiwari, Associate Consultant; Dr. Rakesh, Consultant; and Dr. Mukund, Associate Consultant. The clinic will be operational every Thursday.

Dr. Richa Tiwari stated, "Global statistics reveal that 3-5 in every 1000 children, or 0.5 to 1%, are affected by epilepsy, with one in every 10,000 potentially requiring emergency care. Our aim is to offer specialised, comprehensive care to meet the unique needs of children with epilepsy. We are excited to launch this clinic to provide advanced care with our experienced team, improving the quality of life for young patients and their families."

Welcome Onboard



Dr. Ashish Sapre

Director – Paediatric Cardiology
Medanta - Patna

Dr Sapre is an interventional paediatric cardiologist and congenital and structural heart disease specialist with expertise in paediatric cardiology, grown-up congenital heart defects, fetal cardiology, structural cardiac and vascular defects, acquired paediatric heart diseases, paediatric and neonatal cardiac catheter interventions. He specialises in balloon atrial septostomy, balloon catheter procedures (BPV, BAV), PDA stenting, RVOT perforation and stenting, device closures (VSD, PDA, ASD, PFO, atrial appendage, aortic aneurysm).



Dr. Manmeet Singh

Director - Urology Robotics and Kidney Transplant
Medanta - Lucknow

He specialises in renal transplantation and laparoscopic donor surgeries, female urology (urinary incontinence, genitourinary fistula surgeries, laparoscopic sacrocolpopexy, TVT, TOT), paediatric urology including hypospadias, urethral stricture surgery (DVIU, buccal mucosa graft urethroplasty, PFUDD repairs), male infertility and sexual health services, kidney stone and laser prostate surgery (day care).



Dr. Imran Ahmad Khan

Senior Consultant - Urology Robotics and Kidney Transplant
Medanta - Lucknow

With more than 10 years of experience, Dr Khan specialises in renal transplants, uro-oncology, reconstructive urology (urethroplasty for stricture disease), endourology, robot-assisted surgeries (transplants, prostatectomies, partial nephrectomies), and the treatment of renal stone disease.



Dr. Manish Khattar

Consultant - Urology Robotics and Kidney Transplant
Medanta - Lucknow

Dr Khattar specialises in uro-oncology, endourology, andrology, kidney transplant, robotic-assisted surgeries, and reconstructive urology. He has a keen interest in men's health initiatives and anti-microbial stewardship programmes.



Dr. Sourav Kumar Mishra

Consultant - Interventional Cardiology
Medanta - Lucknow

Expert in stenosed or regurgitating heart valves, angioplasty with stent placement, pacemaker implantation, treatment of heart failure, hypertension, hypertrophic cardiomyopathy, congenital heart diseases, left main coronary artery interventions, CTO and bifurcation stenting, intravascular lithotripsy, non-invasive diagnostic procedures (TMT, ABPM, Holter monitoring, 2D transthoracic and transesophageal echo).



Dr. Rajat Kharbanda

Consultant - Clinical Immunology and Rheumatology
Medanta - Lucknow

Specialises in autoimmune and rheumatic diseases in pregnancy, paediatric rheumatology and immunodeficiency, vasculitis, arthritis (rheumatoid arthritis, spondyloarthritis, gouty arthritis and osteoarthritis), connective tissue disease (SLE, systematic sclerosis, Sjogren Syndrome, Myositis). Experienced in use of biologics, and intra-articular joint injections.



Dr. Mitiksha Shahani Talwar

Associate Consultant - Dental Sciences
Medanta - Gurugram

Specialises in metal, ceramic braces, Invisalign aligners, self-ligating braces, dentofacial orthopaedics, orthognathic surgery, preventive and interceptive orthodontics, miniscrew orthodontics, removable, fixed bite correction devices.





Dr. Ambica Tandon

Consultant - Endocrinology and Diabetes
Medanta - Lucknow

Expertise in menopause, endocrine disorders in pregnancy, other female hormonal disorders, male reproductive disorders, paediatric and pubertal endocrine disorders, pituitary and adrenal disorders, osteoporosis and metabolic bone disorders, diabetes, thyroid and parathyroid disorders, obesity, lipid disorders.



Dr. Preeti Singh

Associate Consultant - Dental Sciences
Medanta - Lucknow

Expert in prosthodontics and dental oncology. Specialises in management of oral complications of pre and post-chemotherapy and radiotherapy patients; maxillofacial prosthetic rehabilitation in surgical cases of head and neck malignancy; anaplasty prosthesis like eye, ear, nose and other surgical defects on the face; implant-supported prosthesis.



Dr. Priyanka Kumari

Associate Consultant - Gynaecology and Gynae-oncology
Medanta - Patna

Skilled in managing high-risk pregnancies, female infertility, fibroids at difficult surgical locations, fibroids mimicking cancer, myomectomy, ovarian tumours (exploratory laparotomy), recurrent endometriosis, preventive gynaecology (cervical cancer screening, post-menopausal health, fertility preservation), hysteroscopy, pregnancy and cancer, uro-gynaecology, primary and secondary amenorrhoea.



Dr. Priyanka Krishna

Associate Consultant - Endocrinology and Diabetes
Medanta - Patna

She specialises in treating diabetes, thyroid disorders, pituitary and adrenal gland disorders, parathyroid disorders, osteoporosis, growth hormone deficiency, puberty-related disorders and PCOD.



IN CASE OF **EMERGENCY** DIAL **1068**

Medanta Network

Hospitals

Medanta - Gurugram

Sector - 38, Gurugram, Haryana | Tel: 0124 4141 414 |
info@medanta.org

Medanta - Lucknow

Sector - A, Pocket - 1, Sushant Golf City,
Amar Shaheed Path, Lucknow | Tel: 0522 4505 050

Medanta - Patna

Jay Prabha Medanta Super-Speciality Hospital,
Kankarbagh Main Road, Kankarbagh Colony, Patna
Tel: 0612 350 5050

Medanta - Ranchi

P.O. Irba, P.S. Ormanjhi, Ranchi | Tel: 1800 891 3100

Medanta - Indore

Plot No. 8, PU4, Scheme No. 54, Vijaynagar Square,
AB Road, Indore | Tel: 0731 4747 000

Mediclinics

Defence Colony

E - 18, Defence Colony, New Delhi | Tel: 011 4411 4411

Cybercity

UG 15/16, DLF Building 10 C, DLF Cyber City,
Phase II, Gurugram | Tel: 0124 4141 472

Subhash Chowk

Plot No. 743P, Sector - 38, Subhash Chowk,
Gurugram | Tel: 0124 4834 547

Cyber Park

Shop No. 16 and 17, Tower B, Ground Floor, DLF
Cyber Park, Plot No. 405B, Sector-20 Udyog Vihar,
Gurugram | Tel: 93541 41472

Medanta Helpline: 8904395588

medanta.org

Upcoming Hospital: Noida