KKASTURI MEDICARE PVT. LTD.

Healthy National Mission

It is a great achievement that India has developed its own COVID-19 Vaccine and we have successfully started the Largest Vaccination Campaign in the World since and the States/UTs have already received vaccines for the same.

A Great Milestone
Long Live India

FAQ's on Covid Vaccines :

1. When is the Corona vaccine likely to be available?
Indian Government launched it since 16th Jaunaury 2021 for priority group & it might reach private market by March.

2. Do we all need to take it?
Yes, all should take it.

3. Who will get it first?
It will be prioritised. First frontline workers and first responders like paramedical staff, civil servants, police, army, politicians and their relatives will get it first. People more than 50 years of age and those with co-morbidities like diabetes, HT, transplant and chemotherapy patients will get it next. Then will be healthy adults, teenagers, children and last neonates if at all.

4. How will it be given ?
Through public and private centres, by doctors, dentists, nurses and trained paramedics.

5. What is the recommended dose and schedule?
wo doses given 21 days or 28 days apart depending on vaccine used.

6. What if I take only one dose?
One dose will give you only partial protection of maybe 60-80% and will not last long enough. For complete protection you must take two doses at recommended intervals.

7. What if I forget to take the second dose? Should I take the first again?
Just take the second dose at the earliest. No need to repeat the first dose.

8. Are both doses same?
In most of the vaccines it will be the same dose given twice. However, Sputnik- V vaccine has both doses as different vector viruses, so will be marked as dose 1 and 2. Oxford-AZ vaccine may also come out with first dose as half dose.

9. Do you need to take it even if you had Corona? After how many days of getting cured?
Yes. But that will be last in the priority list. You can let others take who probably need more than you. You might need it earlier if you did not develop an antibody response.

10. Can it be administered to an individual who has received plasma as treatment for Covid?

The donor plasma contains anti Covid-19 antibodies and may suppress the immune response to the vaccine. As it is, those who have recovered from Covid-19 may not need the vaccine in the early phases.

11. Can a pregnant lady or a lactating mother take the vaccine?
No company has yet tested the vaccine in pregnancy. CDC has advised against giving the vaccine to pregnant and lactating mothers. UK authorities have advised women not to get pregnant for two months after the shot. Since the vaccines available till now are not live vaccines, it should not cause any problem if given inadvertently.

12. Can a diabetic patient take the vaccine?
Yes, in fact diabetes has been established as a risk factor for severe disease and all diabetic patients must get vaccinated on priority.

13. If offered a choice of vaccines, which one should I take?
All vaccines are offering equal efficacy although local reactions may be different. Take whatever available. Think positive that at least you are being offered a vaccine ahead of others. Indian manufactured vaccines will be more suitable for our population as they are cheaper and can be kept at 2-8 degree Celsius. The mRNA vaccines require a storing temp of -70 (Pfizer) and -20 (Moderna) which may be difficult to maintain in summer months.

14. How many days after getting vaccine, would I develop protection?
Best protection starts 10 days after second dose. Efficacy is around 70-90% against all severity and 100% against hospitalization. Immediate aim is to prevent hospitalisation and mortality.

15. How long will the vaccine provide immunity?
It is a new virus, new technology vaccine, so we don't know. After follow-ups of these vaccinated population and their antibodies for a couple of years, we would be wiser. The need for boosters and when will they be required, will be decided after these follow ups and mathematical modelling.

16. Children of what age can be vaccinated? Is the dose same as adults or lesser dose to be given?
Trials done till now have been for adults above 18 only. Now trials for children above 12 have started. Doses will be decided only after trials are done on younger children and infants.

17. Can it be given to immunocompromised individuals?
The mRNA vaccine and inactivated vaccines are safe. AZ and Sputnik-V adenovirus vector vaccines are also safe as they are nonreplicating viral vector vaccines. Live vaccines and replicating viral vector vaccines will have to be avoided.

18. What are the side effects expected?
The side effects reported by the trial population are mostly mild Covid like symptoms like some fever and fatigue. Local injection site pain and induration is also reported. Reports of transverse myelitis and facial palsy have not been found to be related to the vaccine. Generally, all vaccines are safe. Although these vaccines have been made in record time, the testing methodology and procedures have not been compromised.

19. I am allergic to egg. Can I take the vaccine?
Egg cell lines are not used for production of these vaccines. They can be taken safely even if you are allergic to egg.

20. I heard that it has pig or monkey products? I am a pure Vegetarian.
The new vaccines manufactured these days are devoid of any such products.

21. In the past vaccines have been linked to Autism. What about these?
In 1985 there was a paper linking MMR with autism. Millions of children followed up after that have conclusively proven that there is no relationship between vaccines and autism. All vaccines are extremely safe with minimal temporary side effects.

22. There are messages going around that mRNA from vaccine gets incorporated into the human genome and alter our genetic structure. Is that true?
mRNA vaccine carries a message to the cell to produce spike protein which induces antibody production. It does what it is directed to do. Till date there have been no adverse events reported.

23. What is the interaction of alcohol and Covid vaccine?
Excessive alcohol can reduce the immune responses to vaccines. Since Russians are known for heavy drinking, their government has advised to avoid drinking two weeks prior to first dose and 6 weeks after the second dose. The Sputnik vaccine is given as two doses 21 days apart. Occasional glass of wine or beer will not interfere with the immune response.

24. Soon the virus will mutate and we will need another vaccine. Should we not wait?
Till now the virus has not shown tendency to mutate like the Flu virus. Moreover, the vaccines being developed have taken this into consideration and should still work.

25. What if I do not want to take the vaccine? Will it be made mandatory?
In majority of countries, it will not be mandatory. You have to choose between the new viral disease with no specific treatment and a new vaccine. Choice is yours. As initially there will be a huge demand supply gap, by not taking a vaccine you can help others.

26. If I fall in the category of priority list by being a senior citizen or with a co-morbid condition, how do I contact the appropriate vaccination authority?
Soon there will be a website and an app 'CoWIN' where you will be able to register with your relevant details.

27. What is CoWIN?
It is the world's first, digital, end to end, vaccine distribution and management system. It includes beneficiary registration, authentication, document verification, session allocation, AEFI reporting and certificate generation. Once the vaccine is available, it will generate a SMS informing the beneficiary. The vaccine centre itself will be managed by five people and will give maximum 100 vaccines per day. The vaccine recipient has to wait for 30 minutes before leaving the centre post-vaccination.

28. What are the different types of Corona vaccines likely to be available for use in near future?
Covishield , by Serum Institute of India (Oxford AstraZeneca) is a non- replicating viral vector vaccine. These are viruses that have been modified to act as delivery systems that carry the viral antigens to our immune cells. Chimpanzee adenovirus is the vector used to deliver the corona virus antigen in the SII vaccine and human adenoviruses in Sputnik V (Russian vaccine, made in India by Dr Reddy's lab). Covaxin , by Bharat Biotech India Ltd is a whole cell inactivated vaccine. Most of the current vaccines being used in Pediatric immunization, are made by this technology. Since these are killed viruses, they produce immunity, but cannot cause the disease. Pfizer and Moderna vaccines from USA, consist of messenger RNA molecules. The carry the code message which induces the human cell to manufacture spike protein of the Corona virus. These proteins are recognised by our immune system to produce antibodies. Other Indian companies like Biological E, Cadila Healthcare and Genova are also in advanced stage of vaccine development.

29. Can I roam around without a mask once I am vaccinated?

No, not as of now. One may do so only when the majority of the population has either got the disease or received the vaccine. This means the population has developed herd immunity.

30. Are newer and better Covid vaccines expected in near future?

As of December 2020, more than 250 vaccines are under trial in different phases. A lot of research is underway to develop newer delivery methods also. Nasal spray vaccine is probably the most promising. A multi dose nasal spray delivery device can be very convenient and economical. It will produce local IgA antibodies and block the virus at entry itself. It will reduce nasal colonisation and thus prevent transmission of disease also. Unfortunately, since it will be a live vaccine, it will need maximum and most stringent trials and thus will take longest time to hit the market.

Covid-19 is still a new disease and we are still learning. The facts mentioned above are as of 14 December 2020. Please re-check the facts before taking a Covid vaccine shot.

No vaccine gives 100% protection. Also, a vaccinated person may not develop disease but may transmit it to others. Please continue to wear mask, observe physical distance and sanitize hands for some more time.

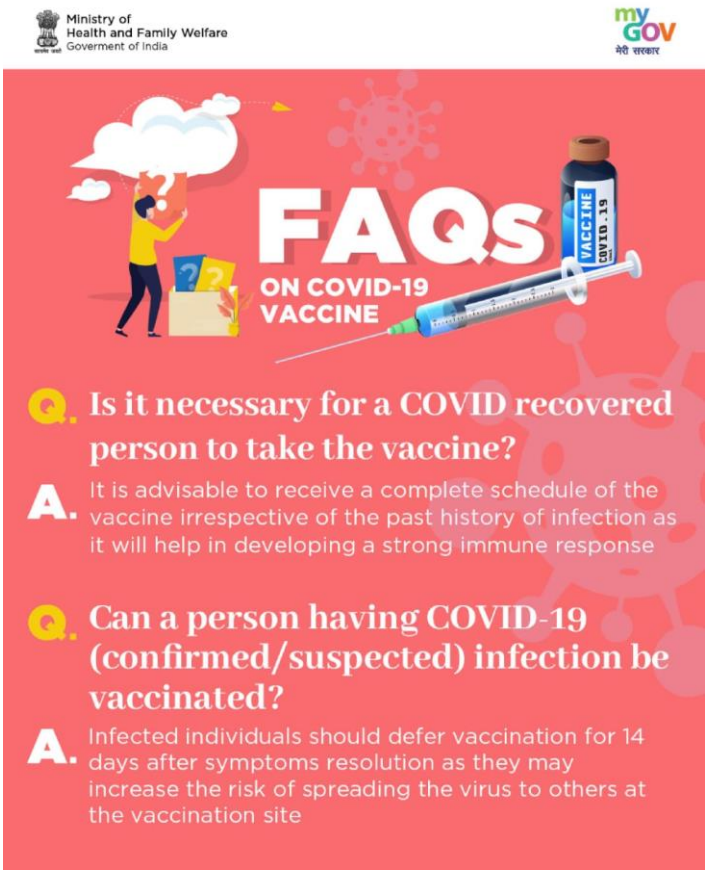
A vaccine is not a magic bullet to end the pandemic. The introduction, logistics, and effects of vaccination is a drawn-out process. Even with a sound biological vaccine, social vaccination is still the most important aspect of disease prevention.

We must continue to take part in the practice of the 'social vaccine'. The COVID-19 social vaccine includes social distancing, hand hygiene, face masks, and isolation.

The two should go hand-in-hand to control the disease, and are not mutually exclusive. Both the above would need staggering community participation, with the social vaccine requiring full and conscious effort of the entire population, without which it is bound to fail. The fate of the pandemic rests in the hands of each and every one of us.

STAY SAFE & STAY HEALTHY

Source : https://www.mohfw.gov.in/
GOVERNMENT OF INDIA MINISTRY OF HEALTH & FAMILY WELFARE



KKASTURI MEDICARE PVT. LTD.

Ministry of Health and Family Welfare
Goverment of India

mygov मेरी सरकार

FAQs ON COVID-19 VACCINE

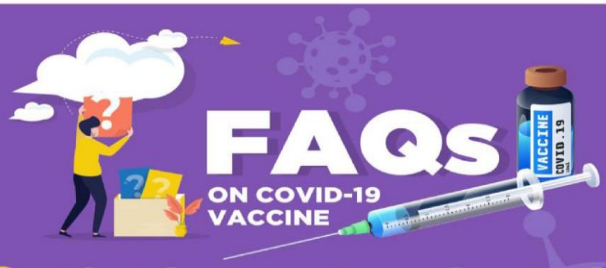
Q. Does India have the capacity to store COVID vaccine at +2 to +8°C & transport them at required temperature?

A. India runs one of the largest immunization programmes in the world, catering to the vaccination needs of over 26 million newborns & 29 million pregnant women

The programme mechanisms are being strengthened to effectively cater to the country's large & diverse population

Ministry of Health and Family Welfare
Goverment of India

mygov मेरी सरकार



FAQs ON COVID-19 VACCINE

Q. What documents are required for registration of eligible beneficiary?

A. Any of the below-mentioned ID with Photo may be produced at the time of registration:

- Aadhaar/Driving License/Voter ID/PAN Card/Passport/ Job Card/Pension Document
- Health Insurance Smart Card issued under the scheme of Ministry of Labour
- Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)
- Official identity cards issued to MPs/MLAs/MLCs
- Passbooks issued by Bank/Post Office
- Service ID Card issued by Central/State Govt./Public Limited Companies

Ministry of Health and Family Welfare
Goverment of India

mygov मेरी सरकार

FAQs ON COVID-19 VACCINE

Q. How will the beneficiary receive information about the due date of vaccination?

A. Following online registration, the beneficiary will receive SMS on their mobile number about the due date, place & time of vaccination

Q. Will beneficiaries receive information on their vaccination status after completion?

A. Yes. On getting due doses of COVID-19 vaccine, the beneficiary will receive SMS on their mobile number. After all doses of vaccine are administered, a QR code-based certificate will also be sent on their number

Ministry of Health and Family Welfare
Goverment of India

mygov मेरी सरकार

FAQs ON COVID-19 VACCINE

Q. Can a person get the COVID-19 vaccine without registration?

A. No, registration is mandatory for COVID-19 vaccination. Only after registration, the information on the session site & time will be shared

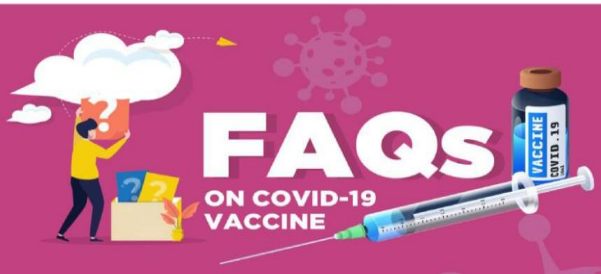
Q. If a person is unable to produce Photo ID at the session site, will s/he be vaccinated?

A. Photo ID is a must for both registration & verification at session site to ensure that the intended person is vaccinated

KKASTURI MEDICARE PVT. LTD.

Ministry of Health and Family Welfare
Goverment of India

mygov मेरी सरकार



FAQs ON COVID-19 VACCINE

Q. Are there any preventive measures & precautions that one needs to follow at the session site?

A.
- You must rest at the vaccination centre for at least half an hour after taking the COVID-19 vaccine
- Inform the nearest health authorities/ANM/ASHA in case you subsequently feel any discomfort or uneasiness
- Remember to continue following COVID Appropriate Behaviours like wearing of masks, maintaining hand sanitization & physical distancing (of 6 feet or Do Gaj)

Ministry of Health and Family Welfare
Goverment of India

mygov मेरी सरकार

FAQs ON COVID-19 VACCINE

Q. What about the possible side-effects from COVID-19 vaccine?

A.
- COVID Vaccine will be introduced only when the safety is proven
- As is true for other vaccines, the common side effects in some individuals could be mild fever, pain, etc. at the site of injection
- States have been asked to start making arrangements to deal with any COVID-19 vaccine-related side-effects

Ministry of Health and Family Welfare
Goverment of India

mygov मेरी सरकार

FAQs ON COVID-19 VACCINE

Q. How many doses of the vaccine would have to be taken & at what interval?

A. Two doses of vaccine, 28 days apart, need to be taken by an individual to complete the vaccination schedule

Q. When would antibodies develop after taking the dose?

A. Protective levels of antibodies are generally developed two weeks after receiving the 2nd dose of COVID-19 vaccine

Ministry of Health and Family Welfare
Goverment of India

mygov मेरी सरकार

FAQs ON COVID-19 VACCINE

Q. If one is taking medicines for illnesses like Cancer, Diabetes, Hypertension, etc., can s/he take the COVID-19 vaccine?

A. Yes. Persons with one or more of these comorbid conditions are considered a high-risk category. They need to get COVID-19 vaccination

Q. Will the family of Healthcare providers/ Frontline workers also be given the vaccine?

A. Due to the limited vaccine supply in the initial phase, it will first be provided to people in priority groups. In subsequent phases, the vaccine will be made available to all others in need

Comparative factsheet for both the vaccines

Precautions and Contraindications for COVID-19 Vaccination

1. **Authorized Age Group:** Under the EUA, COVID-19 vaccination is indicated only for 18 years and above.
2. **Co-administration of vaccines:** If required, COVID-19 vaccine and other vaccines should be separated by an interval of at least 14 days
3. **Interchangeability of COVID-19 Vaccines** is not permitted: Second dose should also be of the same COVID-19 vaccine which was administered as the first dose.

.

Contraindication

1. Persons with history of:

Anaphylactic or allergic reaction to a previous dose of COVID-19 vaccine
Immediate or delayed-onset anaphylaxis or allergic reaction to vaccines or injectable therapies, pharmaceutical products, food-items etc.

2. Pregnancy & Lactation:

• Pregnant & Lactating women have not been part of any COVID-19 vaccine clinical trial so far. Therefore, women who are pregnant or not sure of their pregnancy; and lactating women should not receive COVID-19 vaccine at this time

Provisional / temporary contraindications: In these conditions, COVID vaccination is to be deferred for 4-8 weeks after recovery

1. Persons having active symptoms of SARS-CoV-2 infection.
2. SARS-COV-2 patients who have been given anti-SARS-CoV-2 monoclonal antibodies or convalescent plasma
3. Acutely unwell and hospitalized (with or without intensive care) patients due to any illness

Special precautions:

Vaccine should be administered with caution in persons with history of any bleeding or coagulation disorder (e.g., clotting factor deficiency, coagulopathy or platelet disorder).

Following conditions are not contraindicated for COVID vaccines

Persons with a past history of SARS-CoV-2 infection (sero-positivity) and or RT-PCR positive illness

• History of chronic diseases and morbidities (cardiac, neurological, pulmonary, metabolic, renal, malignancies)

Immuno-deficiency, HIV, patients on immune-suppression due to any condition (the response to the COVID 19 vaccines may be less in these individuals)

Other Important Issues to consider

Vaccine specific contraindications may apply as the new information becomes available

For the use only of a Registered Medical Practitioner or a Hospital or a Laboratory.

ChAdOx1 nCoV- 19 Corona Virus Vaccine (Recombinant)

COVISHIELD™

1 NAME OF THE MEDICINAL PRODUCT

COVISHIELD™
ChAdOx1 nCoV- 19 Corona Virus Vaccine (Recombinant)

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

One dose (0.5 ml) contains:

ChAdOx1 nCoV- 19 Corona Virus Vaccine (Recombinant) 5×10^{10} viral particles (vp)

*Recombinant, replication-deficient chimpanzee adenovirus vector encoding the SARS-CoV-2 Spike (S) glycoprotein. Produced in genetically modified human embryonic kidney (HEK) 293 cells.

This product contains genetically modified organisms (GMOs).

For the full list of excipients, see section 6.1.

Both **COVISHIELD™** (manufactured by Serum Institute of India Pvt Ltd) and COVID-19 Vaccine AstraZeneca (manufactured by AstraZeneca) are ChAdOx1 nCoV- 19 Corona Virus Vaccines (Recombinant).

3 PHARMACEUTICAL FORM

Solution for injection

The solution is colourless to slightly brown, clear to slightly opaque and particle free with a pH of 6.6.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

COVISHIELD™ is indicated for active immunisation of individuals ≥18 years old for the prevention of coronavirus disease 2019 (COVID-19).

4.2 Posology and method of administration

Posology

COVISHIELD™ vaccination course consists of two separate doses of 0.5 ml each. The second dose should be administered between 4 to 6 weeks after the first dose. However, there is data available for administration of the second dose up to 12 weeks after the first dose from the overseas studies (see section 5.1).

It is recommended that individuals who receive a first dose of **COVISHIELD™** complete the vaccination course with **COVISHIELD™** (see section 4.4).

Special populations

Elderly population

Efficacy and safety data are currently limited in individuals ≥ 65 years of age (see sections 4.8 and 5.1). No dosage adjustment is required in elderly individuals ≥ 65 years of age.

Paediatric population

The safety and efficacy of **COVISHIELD™** in children and adolescents (aged <18 years old) have not yet been established. No data are available.

Method of administration

COVISHIELD™ is for intramuscular (IM) injection only, preferably in the deltoid muscle.

For instructions on administration, see section 6.6.

4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

4.4 Special warnings and special precautions for use

Hypersensitivity

As with all injectable vaccines, appropriate medical treatment and supervision should always be readily available in case of an anaphylactic event following the administration of the vaccine.

Concurrent illness

As with other vaccines, administration of **COVISHIELD™** should be postponed in individuals suffering from an acute severe febrile illness. However, the presence of a minor infection, such as cold, and/or low-grade fever should not delay vaccination.

Thrombocytopenia and coagulation disorders

As with other intramuscular injections, **COVISHIELD™** should be given with caution to individuals with thrombocytopenia, any coagulation disorder or to persons on anticoagulation therapy, because bleeding or bruising may occur following an intramuscular administration in these individuals.

Immunocompromised individuals

It is not known whether individuals with impaired immune responsiveness, including individuals receiving immunosuppressant therapy, will elicit the same response as immunocompetent individuals to the vaccine regimen. Immunocompromised individuals may have relatively weaker immune response to the vaccine regimen.

Duration and level of protection

The duration of protection has not yet been established.

As with any vaccine, vaccination with **COVISHIELD™** may not protect all vaccine recipients (See section 5.1).

Interchangeability

No data are available on the use of ChAdOx1 nCoV- 19 Corona Virus Vaccine (Recombinant) in persons that have previously received partial vaccine series with another COVID-19 vaccine.

4.5 Interaction with other medicinal products and other forms of interaction

No interaction studies have been performed.

Concomitant administration of **COVISHIELD™** with other vaccines has not been studied (see section 5.1)

4.6 Fertility, pregnancy and lactation

4.6 Fertility, pregnancy and lactation

Fertility

Preliminary animal studies do not indicate direct or indirect harmful effects with respect to fertility.

Pregnancy

There is a limited experience with the use of ChAdOx1 nCoV-19 Corona Virus Vaccine (Recombinant) in pregnant women.

Preliminary animal studies do not indicate direct or indirect harmful effects with respect to pregnancy, embryofetal development, parturition or postnatal development; definitive animal studies have not been completed yet. The full relevance of animal studies to human risk with vaccines for COVID-19 remains to be established.

Administration of **COVISHIELD™** in pregnancy should only be considered when the potential benefits outweigh any potential risks for the mother and fetus.

Breastfeeding

It is unknown whether **COVISHIELD™** is excreted in human milk.

4.7 Effects on ability to drive and use machines

ChAdOx1 nCoV- 19 Corona Virus Vaccine (Recombinant) has no or negligible influence on the ability to drive and use machines. However, some of the adverse reactions mentioned under section 4.8 may temporarily affect the ability to drive or use machines.

4.8 Undesirable effects

Overall summary of the safety profile from the Overseas studies:

The overall safety of COVID-19 Vaccine AstraZeneca [ChAdOx1 nCoV-19 Corona Virus Vaccine (Recombinant)] is based on an interim analysis of pooled data from four clinical trials conducted in the United Kingdom, Brazil, and South Africa. At the time of analysis, 23,745 participants ≥18 years old had been randomised and received either COVID-19 Vaccine AstraZeneca or control. Out of these, 12,021 received at least one dose of COVID-19 Vaccine AstraZeneca. The median duration of follow-up in the COVID-19 Vaccine AstraZeneca group was 105 days post dose 1, and 62 days post dose 2.

Demographic characteristics were generally similar among participants who received COVID-19 Vaccine AstraZeneca and those who received control. Overall, among the participants who received COVID-19 Vaccine AstraZeneca, 90.3% were aged 18 to 64 years and 9.7% were 65 years of age or older. The majority of recipients were White (75.5%), 10.1% were Black and 3.5% were Asian; 55.8% were female and 44.2% male.

The most frequently reported adverse reactions were injection site tenderness (>60%); injection site pain, headache, fatigue (>50%); myalgia, malaise (>40%); pyrexia, chills (>30%); and arthralgia, nausea (>20%). The majority of adverse reactions were mild to moderate in severity and usually resolved within a few days of vaccination. By day 7 the incidence of subjects with at least one local or systemic reaction was 4% and 13%, respectively. When compared with the first dose, adverse reactions reported after the second dose were milder and reported less frequently.

Adverse reactions were generally milder and reported less frequently in older adults (≥65 years old).

If required, analgesic and/or anti-pyretic medicinal products (e.g. paracetamol-containing products) may be used to provide symptomatic relief from post-vaccination adverse reactions.

Adverse drug reactions

Adverse drug reactions (ADRs) are organised by MedDRA System Organ Class (SOC). Within each SOC, preferred terms are arranged by decreasing frequency and then by decreasing seriousness. Frequencies of occurrence of adverse reactions are defined as: very common (≥1/10); common (≥1/100 to <1/10); uncommon (≥1/1,000 to <1/100); rare (≥1/10,000 to <1/1000); very rare (<1/10,000) and not known (cannot be estimated from available data).

Table 1 - Adverse drug reactions

MedDRA SOC	Frequency	Adverse reactions
Blood and lymphatic system disorders	Uncommon	Lymphadenopathy[a]
Metabolism and nutrition disorders	Uncommon	Decreased appetite[a]
Nervous system disorders	Very common	Headache
	Uncommon	Dizziness[a]
Gastrointestinal disorders	Very common	Nausea
	Common	Vomiting
	Uncommon	Abdominal pain[a]
Skin and subcutaneous tissue disorders	Uncommon	Hyperhidrosisa[a], pruritisa[a], rash[a]
Musculoskeletal and connective tissue disorders	Very common	Myalgia, arthralgia
General disorders and administration site conditions	Very common	Injection site tenderness, injection site pain, injection site warmth, injection site erythema, injection site pruritus, injection site swelling, injection site bruising[b], fatigue, malaise, pyrexia[c], chills
	Common	Injection site induration, influenza like illness[a]

[a] Unsolicited adverse reaction
[b] Injection site bruising includes injection site haematoma (uncommon, unsolicited adverse reaction)
[c] Pyrexia includes feverishness (very common) and fever ≥38 °C (common)

Very rare events of neuroinflammatory disorders have been reported following vaccination with COVID 19 Vaccine AstraZeneca. A causal relationship has not been established.

Overall summary of the safety profile from the Indian study:

COVISHIELD™ was also safe and well tolerated in the phase II/III clinical trial in India. An interim analysis included data of all 1600 participants who received first dose [1200 in **COVISHIELD™** group, 100 in Oxford/AZ-ChAdOx1 nCoV-19 vaccine group and 300 in Placebo group]. This interim analysis includes data collected until 14 Dec 2020 of all 1600 participants who received first dose and 1577 participants who received second dose.

Demographic characteristics were generally similar among participants across the three groups. Overall, among the participants who received **COVISHIELD™**, 87.33% were aged 18 to 59 years and 12.67% were 60 years of age or older.

Overall, the incidence of solicited reactions (injection site reactions such as pain, tenderness, redness, warmth, itch, swelling and induration; and systemic reactions include fever, chills, fatigue, malaise, headache, arthralgia and myalgia), unsolicited adverse events and serious adverse events (SAEs) was comparable in the study and control groups. No causally related SAE was caused by the study vaccine.

4.9 Overdose

4.9 Overdose

Experience of overdose is limited.

There is no specific treatment for an overdose with ChAdOx1 nCoV-19 Corona Virus Vaccine (Recombinant). In the event of an overdose, the individual should be monitored and provided with symptomatic treatment as appropriate.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Mechanism of action

COVISHIELD™ is a monovalent vaccine composed of a single recombinant, replication-deficient chimpanzee adenovirus (ChAdOx1) vector encoding the S glycoprotein of SARS-CoV-2. Following administration, the S glycoprotein of SARS-CoV-2 is expressed locally stimulating neutralizing antibody and cellular immune responses.

Efficacy and immunogenicity data from the Overseas studies:

Clinical efficacy

Interim analysis of pooled data from COV001, COV002, COV003, and COV005

COVID-19 Vaccine AstraZeneca [ChAdOx1 nCoV-19 Corona Virus Vaccine (Recombinant)] has been evaluated based on an interim analysis of pooled data from four on-going randomised, blinded, controlled trials: a Phase I/II Study, COV001 (NCT04324606), in healthy adults 18 to 55 years of age in the UK; a Phase II/III Study, COV002 (NCT04400838), in adults ≥18 years of age (including the elderly) in the UK; a Phase III Study, COV003 (ISRCTN89951424), in adults ≥18 years of age (including the elderly) in Brazil; and a Phase I/II study, COV005 (NCT04444674), in adults aged 18 to 65 years of age in South Africa. The studies excluded participants with history of anaphylaxis or angioedema; severe and/or uncontrolled cardiovascular, gastrointestinal, liver, renal, endocrine/metabolic disease, and neurological illnesses; as well as those with immunosuppression. In studies COV001 and COV002, licensed seasonal influenza and pneumococcal vaccinations were permitted (at least 7 days before or after their study vaccine). All participants are planned to be followed for up to 12 months, for assessments of safety and efficacy against COVID-19 disease.

Based on the pre-defined criteria for interim efficacy analysis, COV002 and COV003 exceeded the threshold of ≥5 virologically confirmed COVID-19 cases per study and therefore contributed to the efficacy analysis; COV001 and COV005 were excluded.

In the pooled analysis for efficacy (COV002 and COV003), participants ≥18 years of age received two doses of COVID-19 Vaccine AstraZeneca (N=5,807) or control (meningococcal vaccine or saline) (N=5,829). Because of logistical constraints, the interval between dose 1 and dose 2 ranged from 4 to 26 weeks.

Baseline demographics were well balanced across COVID-19 Vaccine AstraZeneca and control treatment groups. Overall, among the participants who received COVID-19 Vaccine AstraZeneca, 94.1% of participants were 18 to 64 years old (with 5.9% aged 65 or older); 60.7% of subjects were female; 82.8% were White, 4.6% were Asian, and 4.4% were Black. A total of 2,070 (35.6%) participants had at least one pre-existing comorbidity (defined as a BMI ≥ 30 kg/m^2, cardiovascular disorder, respiratory disease or diabetes). At the time of interim analysis the median follow up time post-dose 1 and post-dose 2 was 132 days and 63 days, respectively.

Final determination of COVID-19 cases were made by an adjudication committee, who also assigned disease severity according to the WHO clinical progression scale. A total of 131 participants had SARS-CoV-2 virologically confirmed (by nucleic acid amplification tests) COVID-19 occurring ≥15 days post second dose with at least one COVID-19 symptom (objective fever (defined as ≥37.8°C), cough, shortness of breath, anosmia, or ageusia) and were without evidence of previous SARS-CoV-2 infection. COVID-19 Vaccine AstraZeneca significantly decreased the incidence of COVID-19 compared to control (see Table 2a).

Table 2a - COVID-19 Vaccine AstraZeneca efficacy against COVID-19[a]

Population	COVID-19 Vaccine AstraZeneca		Control		Vaccine efficacy % (95.84% CI)
	N	Number of COVID-19 cases[b], n (%)	N	Number of COVID-19 cases[b], n (%)	
Primary (see above)	5807		5829		
COVID-19 cases		30 (0.52)		101 (1.73)	70.42 (58.84, 80.63)[a]
Hospitalisations[b]		0		5 (0.09)	
Severe disease[c]		0		1 (0.02)	
Any dose	10,014		10,000		
COVID-19 cases after dose 1		108 (1.08)		227 (2.27)	52.69 (40.52, 62.37)[d]
Hospitalisations after dose 1[b]		2 (0.02)[e]		16 (0.16)	
Severe disease after dose 1[c]		0		2 (0.02)	

N = Number of subjects included in each group; n = Number of subjects having a confirmed event; CI = Confidence Interval; * This is a pooled data of LDSD + SDSD regimen with second dose given at dose intervals ranging from 4 to 12 weeks. LD - Low Dose, SD - Standard Dose.

[a] 95.84% CI; [b] WHO severity grading ≥4; [c] WHO severity grading ≥6; [d] 95% CI; [e] Two cases of hospitalisation occurred on Days 1 and 10 post vaccination.

Table 2b - COVID-19 Vaccine AstraZeneca efficacy against COVID-19

Population	COVID-19 Vaccine AstraZeneca		Control		Vaccine efficacy % (95.84% CI)
	N	Number of COVID-19 cases, n (%)	N	Number of COVID-19 cases, n (%)	
Primary analysis population					
Overall (SDSD + LDSD)	5807	30 (0.52)	5829	101 (1.73)	70.42 (58.84, 80.63)
Licensing regimen					
SDSD	4440	27 (0.61)	4455	71 (1.59)	62.10 (39.96, 76.08)
Exploratory analysis					
LDSD	1367	3 (0.22)	1374	30 (2.18)	90.05 (65.84, 97.10)

Table 4 Summary of Anti-S IgG antibodies

Timepoint	Statistic	COVISHIELD™ (N=291) n (%)	Oxford/AZ-ChAdOx1 nCoV-19 (N=97) n (%)
Baseline	n GMT 95% CI	291 95.4 (77.8, 117.0)	97 80.7 (59.0, 110.4)
Visit 3 - Day 29 (+14)	n GMT 95% CI	289 9988.1 (8395.0, 11883.7)	97 6738.5 (4880.4, 9304.1)
Visit 4 - Day 57 (+14)	n GMT 95% CI	140 33331.6 (27756.0, 40027.2)	46 33263.6 (24383.1, 45378.3)

Table 5 Summary of Proportion of Participants with Seroconversion for Anti-S IgG Antibodies

Timepoint	COVISHIELD™ (N=291) n (%) 95(%) CI	Oxford/AZ-ChAdOx1 nCoV-19 (N=97) n (%) 95(%) CI
Visit 3 - Day 29 (+14)	279 (96.5) (93.7, 98.3)	89 (91.8) (84.4, 96.4)
Visit 4 - Day 57 (+14)	140 (100.0) (97.4, 100.00)	46 (100.0) (92.3, 100.0)

5.2 Pharmacokinetic properties

Not applicable.

5.3 Preclinical safety data

Toxicity and local tolerance studies

Non-clinical data reveal no special hazard for humans based on a conventional study of repeat dose toxicity. Animal studies into potential toxicity to reproduction and development have not yet been completed.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

L-Histidine
L-Histidine hydrochloride monohydrate
Magnesium chloride hexahydrate
Polysorbate 80
Ethanol
Sucrose
Sodium chloride
Disodium edetate dihydrate (EDTA)
Water for injection

(The names of inactive ingredients may vary according to geographical region)

6.2 Incompatibilities

In the absence of compatibility studies, this vaccine must not be mixed with other medicinal products.

6.3 Shelf-life

The expiry date of vaccine is indicated on the label and packaging.

Once opened, multi-dose vials should be used as soon as practically possible and within 6 hours when kept between +2°C and +25°C. All opened multidose vials of **COVISHIELD™** should be discarded at the end of immunization session or within six hours whichever comes first.

6.4 Special precautions for storage

Store in a refrigerator (+2°C to +8°C).

Do not freeze. Protect from light.

Opened multidose vial

For storage conditions after first opening of the medicinal product, see section 6.3.

6.5 Nature and contents of container

COVISHIELD™ is supplied as ready for use liquid in rubber-stoppered multidose vial and single dose vial in below listed presentations

1 dose - 0.5 ml per vial
2 dose - 1.0 ml per vial
5 dose - 2.5 ml per vial
10 dose - 5.0 ml per vial
20 dose - 10 ml per vial

6.6 Instructions for use, handling and disposal

Administration

COVISHIELD™ is a colourless to slightly brown, clear to slightly opaque solution. The vaccine should be inspected visually prior to administration and discarded if particulate matter or differences in the described appearance are observed.

Do not shake the vial.

Each vaccine dose of 0.5 ml is withdrawn into a syringe for injection to be administered intramuscularly. Use a separate sterile needle and syringe for each individual. It is normal for liquid to remain in the vial after withdrawing the final dose.

The vaccine does not contain any preservative. Aseptic technique should be used for withdrawing the dose for administration.

Once opened, multi-dose vials should be used as soon as practically possible and within 6 hours when kept between +2°C and +25°C. Discard any unused vaccine.

To facilitate the traceability of the vaccine, the name and the batch number of the administered product must be recorded for each recipient.

Disposal

COVISHIELD™ contains genetically modified organisms (GMOs). Any unused vaccine or waste material should be disposed of in accordance with local requirements. Spills should be disinfected with an appropriate antiviral disinfectant (e.g. Hydrogen peroxide based disinfectants).

N = Number of subjects included in each group; n = Number of subjects having a confirmed event; CI = Confidence Interval; LD = Low dose; SD = Standard dose

Table 2c - COVID-19 Vaccine AstraZeneca efficacy against COVID-19 by Dose Interval (SDSD)

Dose interval	Participants with events, n (%)		Vaccine efficacy %	95% CI (%)	P-value
	AZD1222 n / N (%)	Control n / N (%)			
< 6 weeks	9 / 1702 (0.53)	19 / 1698 (1.12)	53.28	(-3.21, 8.86)	0.060
6-8 weeks	5 / 562 (0.88)	9 / 521 (1.73)	51.08	(-45.57, 3.56)	0.199
9-11 weeks	9 / 1056 (0.85)	24 / 1110 (2.16)	60.55	(15.23, 81.64)	0.017
≥ 12 weeks	4 / 1120 (0.36)	19 / 1126 (1.69)	78.79	(37.63, 92.79)	0.005

The level of protection gained from single dose of COVID-19 Vaccine AstraZeneca was assessed in an exploratory analysis that included participants who had received one dose. Participants were censored from the analysis at the earliest time point of when they received a second dose or at 12 weeks post-dose 1. In this population, vaccine efficacy from 22 days post dose 1 was 73.00% (95% CI: 48.79; 85.76 [COVID-19 Vaccine AstraZeneca 12/7,998 vs control 44/7,982]).
Exploratory analyses showed that increased immunogenicity was associated with a longer dose interval (see Immunogenicity Table 3). Efficacy is currently demonstrated with more certainty for dose intervals from 8 to 12 weeks and a similar trend for efficacy. Data for intervals longer than 12 weeks are limited.

Participants who had one or more comorbidities had a vaccine efficacy of 73.43% [95% CI: 48.49; 86.29]; 11 (0.53%) vs 43 (2.02%) for COVID 19 Vaccine AstraZeneca (N=2,070) and control (N=2,113), respectively; which was similar to the vaccine efficacy observed in the overall population.

The number of COVID-19 cases (2) in 660 participants ≥ 65 years old were too few to draw conclusions on efficacy. However, in this subpopulation, immunogenicity data are available, see below.

Immunogenicity

Following vaccination with COVID-19 Vaccine AstraZeneca, in participants who were seronegative at baseline, seroconversion (as measured by a ≥4 fold increase from baseline in S-binding antibodies) was demonstrated in ≥98% of participants at 28 days after the first dose and >99% at 28 days after the second. Higher S-binding antibodies were observed with increasing dose interval (Table 3).

Generally similar trends were observed between analyses of neutralising antibodies and S-binding antibodies. An immunological correlate of protection has not been established; therefore, the level of immune response that provides protection against COVID-19 is unknown.

Table 3 - SARS CoV-2 S-binding antibody response to COVID-19 Vaccine AstraZeneca [a,b]

Population	Baseline	28 days after dose 1	28 days after dose 2
	GMT (95% CI)	GMT (95% CI)	GMT (95% CI)
Overall	(N=882) 57.18 (52.8, 62.0)	(N=817) 8386.46 (7758.6, 9065.1)	(N=819) 29034.74 (27118.2, 31086.7)
Dose Interval			
< 6 weeks	(N=481) 60.51 (54.1, 67.7)	(N=479) 8734.08 (7883.1, 9676.9)	(N=443) 22222.73 (20360.50, 24255.3)
6-8 weeks	(N=137) 58.02 (46.3, 72.6)	(N=99) 7295.54 (5857.4, 9086.7)	(N=116) 24363.10 (20088.5, 29547.3)
9-11 weeks	(N=110) 48.79 (39.6, 60.1)	(N=87) 7492.98 (5885.1, 9540.2)	(N=106) 34754.10 (30287.2, 39879.8)
≥ 12 weeks	(N=154) 52.98 (44.4, 63.2)	(N=152) 8618.17 (7195.4, 10322.3)	(N=154) 63181.59 (55180.1, 72343.4)

N = Number of subjects included in each group; GMT = Geometric mean titre; CI = Confidence interval; S = Spike
[a] Immune response evaluated using a multiplex immunoassay. [b] in individuals who received two recommended doses of vaccine.

The immune response observed in participants with one or more comorbidities was consistent with the overall population.

High seroconversion rates were observed in older adults (≥65 years) after the first (97.8% [N=136, 95% CI: 93.7; 99.5]) and the second recommended dose (100.0% [N=111, 95% CI: 96.7; NE]). The increase in S-binding antibodies was numerically lower for participants ≥65 years old (28 days after second dose: GMT=20,727.02 [N=116, 95% CI: 17,646.6; 24,345.2]) when compared to participants aged 18-64 years (28 days after second dose: GMT=30,695.30 [N=703, 95% CI: 28,496.2; 33,064.1]). The majority of participants ≥65 years old had a dose interval of <6 weeks, which may have contributed to the numerically lower titres observed.

In participants with serological evidence of prior SARS-CoV-2 infection at baseline (GMT=13,137.97 [N=29; 95% CI: 7,441.8; 23,194.1]), S-antibody titres peaked 28 days after dose 1 (GMT=175,120.84 [N=28; 95% CI: 120,096.9; 255,354.8).

Spike-specific T cell responses as measured by IFN-γ enzyme-linked immunospot (ELISpot) assay are induced after a first dose of COVID-19 Vaccine AstraZeneca. These do not rise further after a second dose.

Immunogenicity data from the Indian study:

GMTs of IgG antibodies against spike (S) protein were comparable between the groups at baseline - Day 1. GMTs increased significantly after each dose of vaccine in both the groups and were comparable. There was 100% seroconversion in both the groups on Day 57. The immunogenicity data indicates that COVISHIELD is comparable in terms of anti-S IgG antibody titers and seroconversion rates to Oxford/AZ-ChAdOx1 nCoV-19 vaccine (see Tables 4 and 5).

Table 4 Summary of Anti-S IgG antibodies

Comparative Sheet for different Covid-19 vaccines, under Indian Government supply

Comparative Sheet for different Covid-19 vaccines, under Indian Government supply

Indicator	COVISHIELD	COVAXIN
Type of Vaccine	Recombinant COVID-19 vaccine based on Viral Vector Technology	Whole-Virion Inactivated Corona Virus Vaccine
No. of doses in each vial	10	20
Shelf life	6 months	6 months
Expiry date available on vial	Yes	Yes
Vaccine Vial Monitor (VVM)	Not Available	Not Available
Route	Intramuscular (IM) Injectable	Intramuscular (IM) Injectable
Physical Appearance of Vaccine	Clear to slightly opaque, colourless to slightly brown	Whitish translucent
Dose	0.5 ml each dose	0.5 ml each dose
Course	2-doses	2-doses
Schedule	4-weeks apart	4-weeks apart
Vaccination during Pregnancy	Not recommended	Not recommended
Vaccination < 18 years of age	Not recommended	Not recommended
Vaccination to Lactating mother	Not recommended	Not recommended
Storage and transportation	$+2^0$C to $+8^0$C at all levels	$+2^0$C to $+8^0$C at all levels
Cold chain storage space in secondary packaging	2.109 cm^3	1.7187 cm^3
Shake test	Not applicable	Not applicable
Open Vial Policy	Not applicable (Discard after 4 hours of opening)	Not applicable (Discard after 4 hours of opening)
Freeze Sensitive	Yes	Yes
Discard the vaccine vial, if found	'frozen' or 'frozen and thawed'	'frozen' or 'frozen and thawed'
Discard the vial, if	Solution is discoloured or visible particles are observed	Presence of particulate matter or other coloration
AEFI	Some mild AEFI may occur like injection site tenderness, injection site pain, headache, fatigue, myalgia, malaise, pyrexia, chills and arthralgia, nausea	Some mild AEFIs may occur like injection site pain, headache, fatigue, fever, body ache, abdominal pain, nausea and vomiting, dizziness-giddiness, tremor, sweating, cold, cough and injection site swelling
AEFI	Paracetamol may be used to provide symptomatic relief from post-vaccination adverse reactions	
Other	Very rare events of demyelinating disorders have been reported following vaccination with this Vaccine without the causal relationship establishment As with other intramuscular injections, COVISHIELD should be given with caution to individuals with thrombocytopenia	
Any other instruction		Shake well, before use Use of Chloroquine and Corticosteroids may impair antibody response.

Packaging details –

Packaging details	Doses		Dimension		Total Volume	
	COVISHIELD	COVAXIN	COVISHIELD	COVAXIN	COVISHIELD	COVAXIN
Primary	10	20			21.09 cm^3	34.37 cm^3
Secondary	500	320	L-18.5 cm, W-9.5 cm, H- 6 cm	L- 10 cm, W-10 cm, H-5.5 cm	1053 cm^3	550 cm^3
Tertiary	3,000	7680	L-31 cm, W-19 cm, H-13.3 cm	L- 41 cm, W-20 cm, H- 18 cm	7833 cm^3	14760 cm^3
Quaternary (A)*	12,000	Not Applicable	L-57.9 cm, W-46.4 cm, H-37cm	Not Applicable	99402 cm^3	Not Applicable
Quaternary (B)	12,000	Not Applicable	L-60 cm, W-48 cm, H-41cm	Not Applicable	1,18,080 cm^3	Not Applicable

KKASTURI MEDICARE PVT. LTD.

Regn. No. 070

ISO 9001:2015 Certified Hospital

cliniq 21st ASNH Certified Member

QCI

NABH PRE ACCREDITED

NABH Accredited

KKASTURI MEDICARE PVT. LTD.

POLYCLINIC, DIAGNOSTIC CENTRE, ICCU, NICU, DIALYSIS, PAEDIATRIC, SURGICAL, ORTHOPAEDIC, MATERNITY & GENERAL MULTISPECIALITY HOSPITAL

भवतु निदानं चिरजीवनम्

NABH PRE ACCREDITATION, ISO 9001 : 2015 CERTIFIED FEQH/ASNH CLINIQ21 CERTIFIED (EXCELLENT STANDARD)

Harshniketan, Gaondevi Road, Behind Navrang Hotel, Bhayander (W). Email : info@kasturihospital.com Website : www.kasturihospital.com

MULTISPECIALITY SERVICES OFFERED

GENERAL SURGERY	COLONOSCOPY	GENERAL PAEDIATRIC	ENDOCRINOLOGY
HIGH RISK SURGERY	SIGMOIDOSCOPY	PAEDIATRIC CRITICAL CARE	CLINICAL HAEMATOLOGY
UROLOGICAL SURGERY	BRONCHOSCOPY	NEONATOLOGY	ONCOLOGY & HAEMAT ONCOLOGY
PAEDIATRIC SURGERY	ORTHOPAEDIC SURGERY	VACCINATION	PSYCHIATRY
LAPROSCOPIC SURGERY	TRAUMA UNIT	WELL BABY CLINIC	PHYSIOTHERAPY & REHABILITATION
PLASTIC & COSMETIC SURGERY	SPINE SURGERY	GENERAL MEDICINE	RADIOLOGY
BURNS MANAGEMENT	JOINT SURGERY	CARDIOLOGY	DIET & NUTRITION
DIABETIC FOOT MANAGEMENT	HIP REPLACEMENT	CHEST MEDICINE	DERMATOLOGY
ONCO SURGERY	KNEE REPLACEMENT	DIABETOLOGY	EAR NOSE THROAT SURGERY
NEURO SURGERY	ARTHROSCOPY	NEUROLOGY	ENDOSCOPIC SINUS SURGERY
THYROID SURGERY	OBSTETRICS & GYNAECOLOGY	NEPHROLOGY & DIALYSIS UNIT	MICROSCOPIC EAR SURGERY
UPPER GI ENDOSCOPY	VARICOSE VEIN LASER ABLATION	GASTROENTEROLOGY	HIGH RISK PREGNANCY

SPECIAL SERVICES

OLD HOME FOR BEDRIDDEN WITHIN HOSPITAL PREMISES

KASTURI Care for Senior's 2nd Home For Needy Patients

FREE DIALYSIS DONE UNDER

महात्मा ज्योतिबा फुले जन आरोग्य योजना MJPJAY

FACILITIES AVAILABLE

- 50 Bedded Multispeciality Hospital with in house Pharmacy.
- 24 hrs Casualty & Trauma Management & Surgical Care Centre.
- Well equipped 7 bedded ICCU & 7 bedded NICU
- Modernized OT with Laminar flow for all types of Surgeries
- C-Arm with Image Intensifier.
- Haemo Dialysis (Kidney Dialysis Unit) with reverse osmosis water purification plant.
- Availability of all types of Specialists and Super Specialists.
- Physiotherapy and Diet Counseling.
- 24 hrs Diagnostic Facilities (Pathology & Radiology (Portable & Digital X Ray)) Hi-tech machines for Sonography/2D Echo/ TMT
- ECG / PFT / EEG / Vascular Color Doppler / ABG Hitech Video Endoscopy for diagnostic and therapeutic purpose.
- Well Baby Clinic - Vaccination Centre.
- Health package for various age group.
- Empaneled with most TPAs & Corporate companies for cashless facilities.
- Pick Up & Drop Ambulance services.
- Home visits.
- On Panel for MJPJAY & PMJAY (GOVT. SCHEMES).

For Emergency Call 8422867676 8454987676

NABH PRE ACCREDITED (ENTRY LEVEL)

ISO 9001:2015 Certified Hospital

cliniq 21st ASNH Certified Member

QCI

CASHLESS MEDICLAIM FACILITY AVAILABLE

One Stop Hi-Tech Health Care Centre.

KASTURI

One Stop Hi-Tech Health Care Centre

Harshniketan, Gaondevi Road, Behind Navrang Hotel,
Bhayander (W), Thane - 401101
Email : info@kasturihospital.com Website : www.kasturihospital.com

84228 67676 84549 87676

KASTURI MEDICAL FOUNDATION

KKASTURI MEDICARE PVT. LTD.

KASTURI CARE FOR SENIORS

POLYCLINIC, DIAGNOSTIC CENTRE, ICCU, NICU,
DIALYSIS, PAEDIATRIC, SURGICAL, ORTHOPAEDIC,
MATERNITY & GENERAL MULTISPECIALITY HOSPITAL

Dedicated to Community Service

Skills that heal.... Heart that care....

NABH ISO 9001:2008 cliniq 21st QCI

CASHLESS MEDICLAIM FACILITY AVAILABLE WITH ALL LEADING TPA'S, CORPORATES & INSURANCE COMPANIES IN INDIA

We offer our services 24x7

(Share the information with your near & dear once)