Part one:

When you lean on an operating table, anesthesiologist counts down from 10. And when it gets to 7, you see two figures moving over you. That's a robot and the operating surgeon. Surgical robots today are primarily used to assist surgeons in minimally invasive procedures, offering increased precision, dexterity, and control. Leading companies like Intuitive in general surgery, along with Stryker and Zimmer Biomet in orthopedics, are advancing innovative platforms in this field. These robots excel in stabilizing instruments and minimizing hand tremors to improve surgical outcomes. Despite their advanced capabilities, they still operate under the guidance of human surgeons in the stage of assistance. With rapid advancements in artificial intelligence and robotics, fully autonomous surgical robots are likely to replace human surgeons in specific procedures within the next decade, offering greater precision, consistency, and efficiency in routine surgeries. As AI algorithms improve and hardware becomes more sophisticated, the operating room will undergo a transformation, with robots taking on more complex surgical tasks independently.

Part two:

Will fully autonomous surgical robots be capable of replacing human surgeons within the next decade?