**Authors: Noran Morad**

**Frontend Development: A Basic Introduction**

Frontend development is the process of creating and implementing the user interface (UI) and user experience (UX) of a web application or website. This includes anything that the user interacts with directly in the browser.

* User Interface: Visual features of a website include buttons, layouts, fonts, colors, and images.
* User Experience (UX): How the user interacts with the website to ensure easy navigation, responsiveness, and accessibility.

Technologies Used:

1. HTML: is the standard language for structuring web pages. It defines elements such as headings, paragraphs, links, and so forth.
2. CSS: is a language for styling and designing web pages. It manages the layout, colors, fonts, and responsive design of a website.
3. JavaScript is a computer language that adds interactivity to webpages by providing dynamic content, forms, animations, and user interactions.

**Importance of Frontend Development as it relates to cancer**

Frontend development is critical in cancer research, diagnosis, and patient care because it creates easy-to-use interfaces for data visualization, telemedicine, and patient management. It allows scientists to visualize huge cancer genomic datasets, which aids in the analysis of mutations and patient outcomes. Medical practitioners employ intuitive interfaces for cancer imaging and AI-powered diagnosis tools. Patient portals and telemedicine platforms enable cancer patients to view test results, treatment plans, and consultations, thereby enhancing care management. Educational websites increase awareness of cancer prevention, symptoms, and early detection. Frontend interfaces also help recruit clinical trial volunteers and collect patient data. Furthermore, mobile apps enable patients to track symptoms, manage prescriptions, and connect with support networks. Overall, frontend development assures accessible and engaging platforms that improve cancer research, treatment, and awareness initiatives.

**Examples**

One significant example of frontend development's participation in cancer is the “cBioPortal” platform, which is used in cancer genomics research. Its frontend design enables researchers and physicians to readily visualize genetic mutations, copy-number variations, and clinical outcomes. The easy interface makes it easier to access complex data, allowing for individualized cancer treatments and research findings that might otherwise be difficult to grasp.  
  
Another example is “CancerLinQ”, a health-information portal created by the American Society of Clinical Oncology (ASCO). It collects real-world data from oncology practices to better cancer treatment. Its interface allows healthcare providers to easily traverse patient data, providing insights into treatment outcomes based on previous cases. “CancerLinQ” gives relevant information to oncologists through simple dashboards, allowing them to make informed decisions.