

## The science of “viability”

### Overall summary

In the 1973 *Roe v. Wade* decision, the Supreme Court legalized abortion in the United States. The decision made “viability” the delineating line balancing the right of a pregnant person to end a pregnancy with the interests of the State. *Roe v. Wade* found that after the point of viability, states may restrict access to abortion, as long as they provide an exception for the health and life of the pregnant person.

The Supreme Court has defined viability in the context of abortion as:

*“when, in the judgment of the attending physician on the particular facts of the case before him [sic], there is a reasonable likelihood of the fetus’ sustained survival outside the womb, with or without artificial support. Because this point may differ with each pregnancy, neither the legislature nor the courts may proclaim one of the elements entering into the ascertainment of viability — be it weeks of gestation or fetal weight or any other single factor — as the determinant.”*<sup>1</sup>

Both in the law and in medical science, viability is not defined as occurring at a specific gestational age in pregnancy. A recent study of survival of extremely premature infants found that even with active intervention, no infants born at less than 22 weeks of gestation survived.<sup>2</sup> At 23 weeks, survival without severe impairment is less than 2%; at 25 weeks, up to 30% may survive without severe impairment.<sup>3,4</sup>

- Extruterine viability depends on numerous factors, including gestational age, fetal sex, birthweight, and the technological interventions available
- In determining the appropriate course of care for individual pregnancies, physicians use their best clinical judgment and incorporate published evidence of potential survival with the wishes of the pregnant individual
- Doctors and patients together consider the potential for sustained meaningful life, not just brief survival outside the pregnant person’s body, as a critical factor in deciding whether to continue or end each unique pregnancy

Given the poor and variable survival of extremely preterm infants, medical professionals advocate for an individualized approach to counseling and decision-making for families facing very early delivery. The American College of Obstetricians and Gynecologists, together with the Society for Maternal and Fetal Medicine, states that in cases of delivery occurring before 26.0 weeks of gestation, “given the potential for maternal and perinatal mortality and morbidity, the option of pregnancy termination should be reviewed with the patients.”<sup>5</sup> Similarly, the American Academy of Pediatrics states that in most cases of delivery prior to 25 weeks of gestation, shared decision-making with the family should include considerations of death or morbidity for the neonate and the parents’ desires.<sup>6</sup>

### Interpreting the science

Recent data from the United States, France, and England examining survival among extremely premature infants show that survival increases with gestational age.<sup>3,4,7</sup> A subsequent study using the US data examined differences between infants who were given active intervention and those who were not and found that among infants delivered before 22 weeks of gestation, none survived even among those who received active interventions.<sup>2</sup> At 22 weeks, the French study, which was representative of the general French population, reported 0% survival.<sup>3</sup> The English and American studies, which only included infants admitted to neonatal intensive care or delivered at academic centers, respectively, and thus likely overestimates survival of extremely preterm infants from the general population due to the use of more aggressive interventions, reported 7–18% overall survival;<sup>4,7</sup> the US study also assessed morbidity and found that all survivors at this gestational age had what the investigators deemed severe impairment.<sup>4</sup> At 23 weeks of gestation, overall survival was only 1.1% in the French study, with all survivors having severe impairment,<sup>3</sup> and 32–36% in the American and English studies,<sup>4,7</sup> with only 2% survival without severe impairment in the American study.<sup>4</sup> At 24 weeks of gestation, overall survival in the French study increased to 31%, though survival without severe impairment was only 12%.<sup>3</sup> In the American and English studies, overall survival was 59–62%,<sup>4,7</sup> and survival without severe impairment was 7% in the American study.<sup>4</sup>

While overall survival at all earlier gestational ages has improved since the first landmark study in 1995, the same is not true of the proportion of infants surviving without major disability. Increases in the proportion of infants delivered after 25 weeks of gestation who survived to discharge without major morbidity has increased in both the French and American populations, but it has remained steady among infants delivered prior to 25 weeks of gestation.<sup>3,4</sup> A subset of infants from the American study were assessed for neurological impairments at 18–22 months of adjusted age, and a similar pattern of improvements in the proportion surviving without major impairment among those who were delivered after 25 weeks of gestation was found, but there was no marked improvement for those delivered earlier.<sup>8</sup> Regardless of where they are delivered, infants born at early gestational ages require numerous complex and intensive interventions to keep them alive. They survive only due to weeks or months of invasive neonatal intensive care. Because the chance of survival is variable due to a number of factors, including the types of interventions available and the weight and sex of the fetus, there is no “bright line” of viability.



## Responses to anticipated questions

### *Isn't a fetus viable at 24 weeks of pregnancy?*

Although common usage often equates viability with a specific number of weeks of pregnancy, this usage is inaccurate. The potential for fetal survivability outside of the body differs for each pregnancy and can only be made by assessing the fetus as well as the pregnant individual. Some factors that can affect potential viability include chromosomal abnormalities, the pregnant person's health status, and the availability of sophisticated neonatology care. In addition, fetal sex can affect survival, with male sex associated with increased mortality among infants delivered preterm.<sup>9-12</sup> Because of these multiple factors, many babies born at 24 weeks will not survive, and most who do survive will have severe disabilities requiring multiple medical interventions.

### *Because the line of viability continues to become earlier, shouldn't the legal limit for abortion be lowered as well?*

Each pregnancy is different. Both in the law and in medical science, viability is not defined as occurring at a specific gestational age in pregnancy and depends on numerous factors, including gestational age, fetal sex, birth weight, and the technological interventions available. Because viability may differ with each pregnancy, doctors and patients together must decide whether to continue or end each unique pregnancy.

### *Why should the law allow abortion for a potentially viable fetus?*

Making a decision to continue or end a pregnancy can be a complex medical and personal decision that is best left to the patient and treating physician. Together they will weigh the medical and personal circumstances of the pregnancy, including the physical and mental health of the pregnant person and the best medical assessment of the survival for the developing fetus if the pregnancy is continued.

### *Does this mean abortion should be allowed at any point in pregnancy simply because someone wants an abortion?*

We cannot know all the personal and medical circumstances behind someone's decisions about their health and pregnancy. Every person's situation is different, and many times there are no simple answers. However we may feel about abortion at different points in a pregnancy, an individual's health should drive important medical decisions, and one must be able to make decisions with the advice of a trusted health care professional, whether the decision is to end the pregnancy or become a parent. Politicians are not medical experts, and this is not an area where politicians should be interfering.

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