# Grant Smith Ellis Court Log

# USA v. Matthew Farwell — November 2, 2026

*Day 16 · Witness Testimony Summary*

**About this summary:** A condensed reading aid drawn from the Trial Day 16 court-day reconstruction, designed to preserve the principal testimony, material qualifications, and distinctions among direct, cross, redirect, and recross examination. It is not an official transcript; the full reconstruction remains the more complete record.

Reporting source: Grant Smith Ellis (@GrantSmithEllis)

## Court Proceedings Before Testimony

Before jurors entered, Judge Denise J. Casper distributed a draft jury charge and verdict form and identified three issues she wanted argued later in the day: a defense request for a missing-witness instruction, a defense request for a spoliation instruction, and whether the jury should receive a limiting instruction concerning witnesses who described being surprised when Birchmore's death was reported as suicide.

The government also raised a sequestration issue concerning Dr. William Rawlston. Because Rawlston was being offered as a fact witness rather than an expert exempted from sequestration, the government asked whether defense counsel had discussed Dr. William Smock's trial testimony with him. The defense said counsel had spoken with Rawlston the prior evening about Smock. Judge Casper said she would listen closely to the testimony and evaluate the issue in context.

The court then addressed demonstratives and exhibits expected during Dr. Heather Garvin's testimony. Several underlying exhibits were already in evidence. The defense proposed using CT images and a lengthy illustrative presentation; the government did not object to use of the demonstrative, while the judge reminded the parties that an illustrative aid itself was not evidence.

The defense also confirmed that Dr. Zoey Sundell would not testify. While waiting for jurors, Judge Casper previewed portions of the draft charge, including general credibility, immunity, Rule 404(b), stipulations, prior inconsistent statements, statements attributed to Farwell, and hybrid fact/expert testimony.

## Dr. William Rawlston

*Chief Medical Examiner of Kentucky; called by the defense principally to address Dr. William Smock's historical roles, titles, and work within the Kentucky medical-examiner system*

### Testimony focus

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|---|---|
| **Direct** | Rawlston's qualifications; his long acquaintance with Smock; Smock's titles and historical work in Kentucky; clinical forensic medicine; autopsy-technician duties; historical fellowship; later consultant/medication role; whether Smock rendered cause-and-manner opinions for the office. |
| **Cross** | Limits of Rawlston's testimony and knowledge; his disagreements with Smock; Smock's education and historical status; Rawlston's lack of knowledge about some regional-office activity; impeachment/refreshed recollection concerning Smock's consultant title. |

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|---|---|
| **Redirect / recross** | Office policy concerning Smock after Rawlston became chief; distinction between a forensic-consultant role and Smock's limited medication-related affiliation; limits on further questioning; clarification of Rawlston's knowledge of regional-office activity. |

### Smock's historical role in the Kentucky system

Rawlston testified that he had worked in the Kentucky medical-examiner system since the 1990s and had served as chief since 2016. He described overlapping with Smock beginning in the early 1990s and recalled Smock holding the title of assistant medical examiner.

Daley then developed the kind of work Smock performed. Rawlston described a clinical forensic medicine program that examined living patients, including adults reporting domestic violence, police brutality, elder abuse, and related injuries. When asked about work with deceased persons, Rawlston described Smock's earlier role as an autopsy technician. Several attempts to go beyond that description into what Smock was or was not authorized to do drew foundation or relevance objections.

> *"He was an autopsy tech when he first started. He would make the initial incision on the body and then deliver it to the medical examiner."*
>
> *— Rawlston testimony as reported by Ellis, 9:12:47 AM · X post ID 2117258624393228770*

After a lengthy sidebar, Daley asked what qualifications were required for an autopsy technician during the relevant period. Rawlston testified that, at that time, the position required a high-school diploma.

### Fellowship, board certification, and later affiliation

Rawlston testified that Smock had been the first fellow in an older Kentucky program. He distinguished that historical program from the current forensic-pathology fellowship, which requires participation in pathology training.

The direct examination then moved to Smock's later relationship with the office. Rawlston said Smock provided post-exposure prophylactic medication and could be described as a consultant or treating physician for that limited purpose. Asked whether Smock offered cause-and-manner-of-death opinions for the Kentucky medical examiner's office, Rawlston said no.

> *"Does he offer cause and manner of death opinion?"*
> *"Not for the medical examiner's office."*
>
> *— Ellis reporting, 9:22:07 AM · X post ID 2117260971404099697*

### Cross-examination: limits of Rawlston's knowledge

Fogerty first clarified that Rawlston was not testifying about Birchmore's death or its cause and manner. Rawlston said defense counsel had told him Smock testified in the case, but he denied discussing the substance of Smock's testimony.

The government then tested Rawlston's knowledge of Smock's broader work. Rawlston agreed that he and Smock had been at odds in other cases and that, when Rawlston began volunteering in 1992 as a college student, Smock already had more than a high-school education. Asked about Smock accompanying personnel to scenes or a 2024 recommendation from a regional office to consult Smock on a homicide investigation, Rawlston repeatedly said he did not know or was unaware.

Fogerty then returned to the word "consultant." Rawlston initially said he did not know whether former chief medical examiner Traci Corey had recognized Smock as a consultant. After reviewing a January 27, 2021 email, his recollection was refreshed. A hearsay objection limited the government's use of the email,

but Rawlston testified that Smock had been permitted to hold an unpaid consultant title connected to providing post-exposure medication.

> *"Was Dr. Smock recognized as a consultant by former Medical examiner?"*
> *"He was allowed to hold the title of unpaid consultant, as I said he provided post exposure medications to the office."*
> *— Ellis reporting, 9:36:57 AM · X post ID 2117264704418578568*

#### Redirect and recross

On redirect, Daley asked whether it was the policy or practice of Rawlston's office, during his tenure as chief, to engage Smock for death-scene work. Rawlston said no.

Daley also asked whether Smock had worked as a forensic consultant from 1997 through 2024. Rawlston said he could not speak to the entire earlier period but testified that from 2016 through 2024 Smock was not serving as a forensic consultant for the office in the substantive sense Daley was asking about. At the same time, Rawlston acknowledged that Smock's medication-related work required an office affiliation and that the title "forensic consultant" could apply to that limited role.

On recross, Fogerty returned to Rawlston's statement that he was unaware of some activity at the Frankfurt regional office. Rawlston clarified that he was aware of some matters there but did not know of a request to contact Smock. Judge Casper declined a further defense round and excused the witness.

## Dr. Heather Garvin

*Forensic anthropologist; called by the defense to address hyoid anatomy, fracture literature, age and fusion, hanging mechanics, and whether Birchmore's hyoid fracture could by itself distinguish hanging from other mechanisms*

#### Testimony focus

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|---|---|
| **Direct** | Garvin's forensic-anthropology background; hyoid anatomy and ossification; published literature on hyoid/laryngeal fractures in hanging; complete vs incomplete suspension; age and knot-location variables; examples of fractures in younger people; limits of using a hyoid fracture alone to infer manner. |
| **Cross** | Garvin did not examine Birchmore's hyoid; limits of case-review methodology; literature's dependence on underlying classifications; greater fracture frequency in older/fused hyoids; lack of identified examples combining young age + unfused hyoid + seated hanging; blunt-force mechanism; strangulation as a common cause of hyoid fracture; limits of scene/autopsy experience. |
| **Redirect / recross** | Clarification that literature separately documents seated-hanging fractures and fractures in unfused hyoids, but does not combine those variables; final concession that the specific combination at issue was not documented in the cited literature. |

#### Hyoid anatomy and the literature on hanging

Garvin described academic work in forensic anthropology, including graduate research on ossification of laryngeal structures and current research on hyoid fractures. She explained hyoid anatomy and then turned to the case materials.

The defense spent substantial time walking her through published studies and meta-analyses. Garvin testified that hyoid and laryngeal fractures are reported in hanging, including incomplete or partial

suspensions, and that fracture rates vary substantially across studies. She discussed variables including age, complete versus incomplete suspension, and knot position. She explained that an incomplete suspension is a partial hanging in which some part of the body remains in contact with the ground.

Garvin discussed a meta-analysis and other published work reporting hyoid or laryngeal fractures in suicidal hangings, including some cases involving younger individuals. She agreed that fracture frequency increases with age but emphasized that fractures are still documented below age 40.

#### Limits of the fracture as a stand-alone indicator

Garvin testified that the literature did not allow a hyoid fracture, standing alone, to determine whether a death was suicidal hanging or something else. Asked whether the fracture itself indicated suicidal hanging, she said the anatomy did not point either way.

> *"Looking at the hyoid bone fracture or the anatomy there is nothing to indicate either way, you can't say."*
>
> *— Garvin testimony as reported by Ellis, 10:54:22 AM · X post ID 2117284187925315790*

#### Cross-examination: what Garvin did not examine

The government began by establishing that Garvin had not physically examined Birchmore's hyoid bone. Garvin agreed that direct examination of a bone is ordinarily preferable and characterized her work here as a case review based on other people's examinations and records rather than a physical analysis of the specimen.

The government also established limits on her professional role: she is not a medical doctor, does not determine cause and manner of death, had not responded to live hanging scenes, had not treated survivors of hanging, and had not participated in autopsies as a forensic pathologist.

#### Age, fusion, and the specific seated-hanging combination

Cross then narrowed the literature from the broad proposition that hyoid fractures can occur in hangings to the specific combination presented in Birchmore's case. Garvin agreed that Birchmore was 23 and her hyoid was unfused. She also agreed that fracture frequency increases with age and that younger, unfused hyoids are generally more flexible.

The government repeatedly asked whether any cited literature documented a person under 40 with an unfused hyoid sustaining a hyoid fracture in a seated hanging. Garvin distinguished between studies showing fractures in younger people and studies showing fractures in seated hangings, but acknowledged that the cited literature did not analyze the combined variables at that level.

> *"But none of them show any examples of someone under 40 with a broken hyoid bone from a seated hanging?"*
> *"That is correct, none of them analyze that."*
>
> *— Ellis reporting, 11:50:46 AM · X post ID 2117298381840097364*

That distinction remained important as the questioning became more specific. Later, when the government asked whether she had found any study documenting the combination, Garvin answered:

> *"I could not find any, no."*
>
> *— Garvin testimony as reported by Ellis, 11:57:03 AM · X post ID 2117299964237754546*

The government then walked through individual slides and studies. Garvin agreed that certain cited seated-hanging fracture examples involved older individuals, and that several slides did not identify any seated-hanging fracture in a person under 40.

### Mechanism, blunt force, and strangulation

Cross also addressed mechanism. Garvin agreed that the Birchmore hyoid fracture was inward and perimortem and described it as blunt-force trauma. The government then asked her to separate what the injury could establish from what it could not.

> *"So, you can't tell what caused the injury to the hyoid bone beyond blunt force trauma?"*
> *"Yes."*
> *"And Ms. Birchmore's hyoid bone was unfused, fractured inward and downward?"*
> *"Yes."*
> *"And the most common cause of hyoid fracture is strangulation?"*
> *"Yes."*
>
> — *Ellis reporting, 12:12:17 PM* · X post ID 2117303796082815362

Garvin's answers did not alter her earlier testimony that the fracture itself could not establish manner. The government also asked about the quality of literature-based inference. Garvin agreed that published hanging studies depend on how the underlying cases were classified and that the strength of a review depends on the quality and design of those studies.

### Redirect and recross

On redirect, the defense returned to the distinction between the variables. Garvin said the literature separately contains cases of hyoid fractures in seated hangings and cases involving unfused hyoids, but none of the articles she reviewed put those two facts together in the same analysis.

> *"There are articles that show hyoid bones broken in seated hangings. There are articles that show broken hyoid bones in unfused hyoid bones."*
>
> — *Garvin testimony as reported by Ellis, 12:16:35 PM* · X post ID 2117304879064744161

On recross, the government returned to the same combined-variable point. Garvin agreed that seated hangings with fractured hyoids in people with unfused hyoids were not documented in the material being discussed. She was then excused.

## Dr. Alicia McCarthy

*Forensic scientist with a background in chemistry, feature-comparison disciplines, footwear/tyre examination, OSAC/standards work, and forensic-science teaching; called by the defense to evaluate whether the chest mark could be associated with parts of the ligature hardware and to address methodology and bias control*

### Testimony focus

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|---|---|
| **Direct** | McCarthy's forensic-science background; feature-comparison work and standards; linear sequential unmasking; materials reviewed; comparison of the chest mark to the buckle/lobster-claw clasp; limits created by photography; modeling-clay methodology; ACE/ACVE-style comparison; conclusion of inconclusive. |
| **Cross** | Pattern-comparison principles; effect of skin deformation and intervening material; McCarthy did not inspect the ligature or exemplar; comparison using available photographs; possibility that the clasp could have made the mark; limits on force and three-dimensional assessment. |
| **Redirect / recross** | Her conclusion was not that the clasp was excluded; immediate qualification of the "equally possible" wording used on cross; clarification of why she used photo comparison rather than clay; Smock's use of a facsimile; origin of the photographs unknown to McCarthy; she was unaware Smock had traveled to Boston to measure the ligature. |

### Methodology and bias control

McCarthy described a long forensic-science career, including work in feature comparison, footwear examination, standards development, and teaching. She explained that in this case she was asked to examine a questioned impression on a decedent's skin and compare it with an item she was told might be the ligature.

She described using linear sequential unmasking, a process intended to minimize cognitive bias by controlling when potentially biasing contextual information is revealed. McCarthy testified that she initially reviewed materials without knowing the identity of the prior author and learned later that the work she was reviewing was Dr. Smock's.

### Chest-mark comparison and limits of the photographs

McCarthy's analysis compared the chest mark in photographs with features of the ligature hardware. She testified that the photographs were not ideal for exact measurement and that image angle and scale limited how much weight she could place on similarities.

She also testified that modeling clay was not a technique she had been trained to use for this kind of comparison. Asked whether modeling clay replicates human skin, she said she did not know; asked whether such use was part of her field, she said no.

When Daley asked for her ultimate conclusion, McCarthy said the comparison was inconclusive and explained why in terms that are difficult to reduce without losing the uncertainty she expressed.

> *"There were similarities with the clasp and the buckle, and with the photos not taken appropriate, I didn't know how much weight to put on the images. I say inconclusive that one of them could make the mark, and the proposition that it didn't make the mark, is the same. It's kind of like I'm on the fence."*
>
> *— McCarthy testimony as reported by Ellis, 2:09:49 PM ·* X post ID 2117333375488757995

### Cross-examination: available materials and physical limitations

On cross, the government established that McCarthy did not inspect the original ligature or an exemplar. She had not taken her own photographs and worked only from photographs supplied to her by the defense. McCarthy said that if she had been supplied the strap, she would ordinarily have taken appropriate comparison photographs rather than necessarily making a cast.

The government also asked about skin deformation and force. McCarthy agreed that skin can deform when an object is pressed into it and that intervening material could affect the resulting mark, though some questions went beyond her expertise.

### Lobster-claw clasp and the meaning of "possible"

The government displayed the chest photograph alongside an image of the lobster-claw clasp and asked about a rounded feature on the clasp. McCarthy agreed there was a circular shape and said it appeared that feature could sit at a different dimension from other parts of the hardware, while cautioning that she had not personally examined the strap.

A hypothetical asking whether an elevated feature would produce a darker red spot drew a sustained objection. The government then asked whether the clasp could have caused the mark. McCarthy's wording was more qualified than a simple identification or exclusion:

> *“My conclusion is that it is equally possible and not.”*
> *“So it is possible it did make the mark?”*
> *“Yes.”*
> *— Ellis reporting, 2:26:03 PM · X post ID 2117337459860369473*

#### Redirect and recross

On redirect, the defense immediately returned to that wording. McCarthy qualified the phrase she had just used:

> *“Well, not equally possible, but yes.”*
> *— McCarthy testimony as reported by Ellis, 2:27:50 PM · X post ID 2117337910940668218*

The defense then returned to the limits of the available material. McCarthy said the only autopsy photographs she had were those supplied to her. She testified that Smock appeared to have used the same photographs, had used a facsimile rather than the original strap, and had made an imprint in clay. A question asking whether that was proper scientific method was sustained as asked and answered.

McCarthy testified that her own photo-comparison method was the scientific method she uses for questioned-impression comparison. She also said she did not know who originally took the photographs; she only knew the defense supplied them.

On recross, the government asked whether she knew Smock had personally traveled to Boston to measure the ligature. McCarthy said she was not aware of that. Judge Casper declined a further defense round and excused her.

## Court Proceedings After Witness Testimony

After McCarthy was excused, Judge Casper released the jury early and held the charge conference.

#### Missing-witness instruction

The defense identified Darlene Smith as its strongest missing-witness example and also referenced several other people who communicated with Birchmore near the end of her life. The defense argued that Smith was not realistically available to it and that her absence warranted a permissive inference.

The government argued that the defense had not shown the witnesses were uniquely available to the government or identified specific relevant, non-cumulative testimony they would provide. Judge Casper declined to give the instruction on the record then before her, finding that the identified witnesses did not clearly fall into the category required by the case law and that the jury had already heard substantial evidence about Birchmore’s communications with Smith and others. The defense objection was preserved.

#### Spoliation instruction

The defense asked Judge Casper to reserve ruling until after Dan Loper testified about the initial extraction of Birchmore’s laptop and the loss of that extraction. The defense argued that the laptop had been accessed, searched while connected to a network, synchronized with an iPhone, imaged, and later subject to loss of the initial extraction after a reported server or hard-drive failure. It argued that the handling could amount to gross negligence.

The government argued that the evidence showed no bad-faith destruction and characterized the loss as a hard-drive failure. Judge Casper reserved ruling until after Loper testified and said she did not presently see a basis for the instruction, particularly because she had not heard evidence of bad faith and was not yet persuaded the conduct rose to the necessary level of negligence.

### State-of-mind limiting instruction

The parties next addressed witnesses who had described being surprised when Birchmore's death was reported as suicide. The defense argued that without a limiting instruction jurors might improperly use those reactions as evidence that Birchmore did not die by suicide. Judge Casper said she would add language explaining that such testimony was admitted to provide context for the witnesses' later actions and could not be considered as evidence of the cause or manner of Birchmore's death.

### Additional charge issues

The parties also discussed the Fowler instruction concerning the reasonable likelihood of communication with federal law enforcement, the immunized-witness instruction, statements attributed to Matthew Farwell, and the defense request for a special verdict form. Judge Casper indicated she would continue reviewing proposed changes, rejected the special verdict form, and said she would revisit spoliation after Loper's testimony.

### Editorial note

This Witness Summary is a condensed reading aid derived from the November 2, 2026 full reconstruction of Grant Smith Ellis's contemporaneous courtroom reporting. It is intended to reduce routine credentials, repetitive foundation, lengthy study recitations, and cumulative objections while retaining the principal testimony, material qualifications, uncertainty, distinctions between examination stages, and the difference between propositions asked and testimony actually given.

The content structure follows the archive's established Witness Summary model: source line; witness name and role; examination-stage testimony-focus table; thematic narrative subsections; and selected excerpts with Ellis attribution, timestamp, and source X post ID.

Excerpt principle: Excerpts are not decorative pull quotes and are not selected to meet a quota or manufacture visual breaks. They are retained where exact phrasing materially improves fidelity or comprehension — for example, where a concession, qualification, contested formulation, evidentiary limitation, or progression of answers would lose something important in paraphrase. More than one excerpt may be used when necessary to preserve the progression or balance of the testimony. Language that can be faithfully summarized without meaningful loss remains in narrative form.

This workflow did not rerun the underlying source-retrieval audit. The source reconstruction itself remains subject to the inherited source-level limitations documented in its QA record. The present file is the production rendering of the canonical Day 16 Witness Summary.