

## **Dr. Cappuccino and Dr. Marzo**

September 10, 2007

### **Opening Statement**

Dr. Marzo: As you all know yesterday during the football game Kevin Everett suffered a contact injury striking another player while making a tackle. When we arrived on the field Kevin was in fact conscious, alert and responsive, however he was unable to move any of his extremities. Clearly we suspected an injury to the cervical spine and or cervical spinal cord at which time we began our prepared and rehearsed protocols for extricating a player with that sort of an injury. As you all saw we had multiple parties involved including the Rural Metro emergency medical services whom I would like to give thanks to. We had our training staff and our physician staff who each have their role in a situation like that. As you saw we were very careful in positioning Kevin. We immobilized him on a spine board and transported him in an ambulance. He was transported to a Kaleida health facility, Millard Fillmore Gates hospital. He underwent urgent imaging studies yesterday which confirmed our fears. That of a combination of a fracture dislocation of the cervical spine and an injury to the cervical spinal cord. Dr. Cappuccino was with Kevin Everett from the ambulance on the field and accompanied him through the imaging studies. He then performed emergency decompressive surgery whose purpose was two-fold. Primarily it is to decompress the cervical spinal cord to allow as much neurologic relaxation as possible and take away any extrinsic pressure or pinching of the spinal cord. The second purpose in the surgery was to stabilize the bony conduit of the cervical spine around this cervical cord. I'll now turn it over to Dr. Cappuccino and he can explain a little bit more the medical details of the procedure. He can then tell you the details of Kevin's prior and present neurologic condition and then we can entertain questions.

Dr. Cappuccino: I'm a spinal consultant to the Buffalo Bills and a specialist in the treatment and care of disorders of the spine and spinal injuries. The immobilization protocol was excellent. He was in a timely fashion, assessed, evaluated and placed in an ambulance. By the time he was in the ambulance he was secured appropriately to a backboard and stabilized in a manner which allowed my hands to be free so that we could commence in the ambulance a resuscitation protocol. That involved placement of several large intravenous catheters and fluid resuscitation while monitoring his heart, his breathing and his neurologic status. At that time we commenced flushing his body with cold fluids in order to lower his temperature. Lowering his temperature has been shown to help in spinal cord sparing. This was instituted within 15 minutes of the time of the injury. At the same time we instituted a protocol utilizing a medicine known as SoluMedrol. It's a very potent anti-inflammatory agent among the most potent anti-swelling medicines known to man. We have set protocols that we follow. We give this in large doses in order to help protect the spinal cord. During the course of the ride we lowered the temperature. We contacted Millard Fillmore Gates Circle of the Kaleida system because we knew that we were capable of not only getting a CAT scan and plain x-rays quickly, but we had the ability with 24 hour MRI capabilities to have an immediate MRI and time was of the essence here. We arrived at Millard Fillmore Gates hospital in a short period of time and were immediately greeted in the emergency room by the ED staff and by representatives of the department of neurological surgery who helped in the immediate stabilization.

Within one hour from the time of arrival regular x-rays and immobilization with a collar was performed. A diagnosis was made on regular x-ray of a fracture dislocation between the third and fourth cervical vertebrae with an incomplete neurologic injury.

At the time that we assessed him he did not have any movement below the level of his shoulders, but did have the ability to feel pressure, touch sensation all the way down to his feet. Immediately he was taken to the CAT scan unit where a CAT scan was performed to evaluate the bony anatomy because we get better bony detail with a CAT scan. Subsequently an urgent MRI was procured to evaluate the spinal cord. The MRI did corroborate our fears that there was direct compression of the cervical spinal cord between the third and fourth vertebrae without transaction

of the cord. The cord was intact on all views. There was some disc material pushing on the cord and some bone of the fourth vertebrae, not a fragment, but the bone where the spinal column had translocated and the spinal cord was tented over the vertebrae. At this point in time it was deemed necessary to perform urgent decompressive surgery. The operating room was alerted and he was immediately taken from the MRI unit to the operating suite where I was met by Dr. Kevin Gibbons, one of the neurological surgeons who participated in his care and is still doing so. After determining the exact diagnosis with an incomplete neurologic injury at the C-4 level, I contacted Kevin's mother and I was with Kevin second by second. I did not leave him and he was awake and he was alert and he was responsive. He understood what had happened and what needed to be done. By phone we spoke to his mother in Texas. We unfortunately had the sad duty to apprise her of the grave nature of his injury. And in conjunction with Kevin and his mother consent was performed. She spoke to Kevin, it put Kevin at ease and it put her at ease. At that point we went to the operating room where an awake, under x-ray guided reduction, manipulation and placing the spine back in alignment was performed. Subsequently Dr. Gibbons and myself worked first on the front side of the cervical spine to remove the disc, realign the spine and to fixate the spine between the third and fourth vertebrae with a bone graft, with a small cage, and with a plate and four screws. We had the spine in good alignment and it was confirmed on all x-ray studies. That was approximately an hour and a half time of surgery.

Under the same anesthesia he was turned to the prone or face down position. A second incision was made on the back of his neck. The spine was decompressed or the pressure was relieved with a laminectomy the lamina of the third and fourth cervical vertebrae were removed. The spinal cord was completely decompressed and the spine was fixated from the back with four screws and two small rods. At that point in time an intra-operative ultrasound was performed to evaluate the cord, the covering of the cord and the cord itself were completely intact and looked good. At this point he was closed, drains were placed, he was taken to the intensive care unit. At this point he was on the respirator, and as we speak he is still on the respirator this is by our choice. His respirator is being managed by the neurological surgeons and the pulmonology specialists. He is intentionally being kept in a quiescent state on the respirator being provided with every possible mechanism to allow the swelling to go down in his spinal cord. With guidance from Dr. Gibbons we were able to assess him neurologically this morning. Prior to putting him into a deepened state where we could lower his body temperature to a very low status and control all his bodily functions a neurologic exam was conducted. This morning once again he had decreased sensation but the ability to feel all of his limbs. This examination about six hours after surgery did show voluntary movement of his legs in his AD doctors, the muscles that pull his legs together, the quadriceps and the plantar flexors, the motors that push his feet down.

I want to caution everyone to understand that this was early in the healing phase and this is not a prognostic indicator and this young man suffered a potentially lethal and grave injury. So we are still gravely concerned.

Dr. Cappuccino: Prior to putting him into a deepened state, where we could lower his body temperature to a very low status and control all of his bodily functions, a neurological exam was conducted. This morning he once again had decreased sensations, but the ability to feel all of his limbs. This examination, about six hours after surgery, did show voluntary movement of his legs and his muscles that pull his legs together, the quadriceps and the plantar flexors, the motors that push his feet down. I want to caution everyone to understand that this was early in the healing phase and this is not a prognostic indicator. This young man suffered a potentially lethal and grave injury. We are still greatly concerned. At this time, he will be controlled, in terms of all his bodily functions- heart rate and respirations – for the next 48-72 hours. And we will not be able to give you a good, clinical and neurological exam. We would hope that you would be patient for his sake and for his parents' sake. Through Dr. Marzo and Mr. Berchtold we will convey all information to you as we see fit and as it come to us. You will get the information as we have it, in an honest format. I want to emphasize the fact that this was a potentially catastrophic injury. Everything that could possibly be done to restore his neurological status was done. The time

frame was more expeditious than anyone could even hope for. We cannot make any predictions about his prognosis at the present time.

**On if he was in danger of losing his life and if he is in that danger now**

Dr. Cappuccino: He is not out of that danger now. He is less in that danger than he was in the time of his injury or within the first several hours. An injury at this cervical spinal level, often affects the respiratory centers and can lead to respiratory collapse, the inability to breath. A human being that has injury and is not tended to in a timely fashion can die from respiratory failure.

**On if he knows if Kevin is out of the woods in a survival standpoint**

Dr. Cappuccino: That is hard to say, because there are so many factors in an injury of this magnitude, not just spine related. So, that cannot be answered in terms of hours or minutes, that is a question that can only be answered in terms of days and weeks.

**On if there is any type of optimism to get out of his voluntary movement**

Dr. Cappuccino: By life I am an optimist, but as a scientist and clinician, I have to tell you that statistically the chances of that occurring are very small.

**On if Kevin is able to breath on his own**

Dr. Cappuccino: The best that I can answer that question is that this morning while he assessing him neurologically, we also had him awake and responsive enough to turn off the respirator and ask him to try to breath. At that point this morning, he was able to mount enough respiratory drive that he could have been easily able to breathe on his own. But I caution you by saying that this is very early in the phase and these injuries take valleys and pits and we may have been at a peak of a mountain, where we are still headed for a deep valley.

**On what some of the complications are to be worried about**

Dr. Cappuccino: Our greatest concerns, in terms of immediate mortality, would be those involving blood clotting and blood clots that can go to his lungs or heart. We would certainly be concerned about infection, for instance pneumonia. When someone is on the respirator for a long time, or they don't have the ability to breathe deeply and cough as well as a normal person, those are grave concerns of ours.

**On the total surgery time**

Dr. Cappuccino: He was in surgery, including the manipulative closed reduction and the surgical interventions, approximately four hours.

**On what he was thinking and if he was lucid**

Dr. Cappuccino: He was certainly frightened, but he was concerned about his mother and how she was going to respond to this. He told her that he loved her and he told her that he loved his sisters. He told her that he was going to get better and he didn't want her to worry.

**On if his world class fitness level could be a positive to help him recover**

Dr. Cappuccino: Absolutely.

**On if some sensation and voluntary movement be a good sign**

Dr. Cappuccino: As I mentioned earlier, he has what is called an incomplete spinal cord injury, which means that we can tell that by the absence of movement that certain parts of the cord are injured and certain parts of the cord may be spared. We don't whether that injury will expand or contract. Our job, my job, Dr. Gibbons job and Dr. Marzo's job, is to do everything that we can do to help or hope for it to go in the contract as opposed to expand direction.

**On what would be the best case scenario and recovery time frame**

Dr. Cappuccino: The best case scenario would be a complete recovery, not likely. A timeframe is many months.

**On if he is in a drug reduced coma**

Dr. Cappuccino: It's not quite a coma but he is in a deeply sedated, drug-induced state.

**On the emotion of what he said and what he told his mom**

Dr. Cappuccino: As the father of many children, this is one of the most painful things that any physician can do is try to explain the parents that one of their children has a catastrophic injury which he may not only recover from but he might die from. And as painfully as I could in terms that a layman could understand I tried to explain that to her. She found comfort in knowing that everything was being done for him and she found comfort in knowing that he was comfortable with the care that he was getting.

**On the difference between his injury and someone who had a complete severed cord**

Dr. Cappuccino: It's related to the level of the spinal cord which is injured. The lower cervical spine would have a lower likelihood of immediate mortality from respiratory collapse. Kevin's injury is significantly high in the cervical spine that it made that a real possibility. The possibility that he could succumb to respiratory failure, need respiratory support, could be ventilator-dependent for whatever life he has life, however long or short it might be.

**On what he recalls from the events on the field and the play**

Dr. Cappuccino: Kevin remembered the moment of contact, the hit itself and where it came from.

**On if Kevin is done with surgeries and if he would need anymore in the future**

Dr. Cappuccino: I hope so. In terms his spinal column, the decompression and the reconstruction of the spine, I do not anticipate any further surgery. Certainly if the neurological outcome is not good, surgeries may be warranted to help support other systems.

**On the nature of the injury and if there was a fracture between the third and fourth vertebrae**

Dr. Cappuccino: Yes, that's true.

**On a clarification of the injury**

Dr. Cappuccino: The vertebrae were out of alignment. It was a fractured dislocation. The vertebrae bodies of a spine line up like box cars of a train. When we got to Kevin and made the diagnosis the third cervical vertebrae had translocated completely over the front of the fourth cervical vertebrae causing a scissoring affect or a pinching on the spinal cord.

**On what Kevin was feeling in his heart**

Dr. Cappuccino: Kevin is a male, NFL athlete and he's got a warrior's mentality. He felt confident in his mind that he was going to maximize his ability to have a good outcome. He was afraid that this mother would not be able understand or deal with the potential negative outcome and he feared the distance between she and he, with her being in Texas at the time, might be very discomfoting for her.

**On if there will be some paralysis**

Dr. Cappuccino: I believe there will be some permanent neurologic deficit.

**On how the nature of the hit impacted the injury**

Dr. Cappuccino: I could not describe that for you. I have an injured player on the field. I never saw a replay. I haven't looked at it and my concern was for the young man's well-being.

Dr. Marzo: Similarly from my vantage point on the sideline, I didn't actually see the impact. I saw the early results of a player prone on the field, immobile.

**On if this is common in football**

Dr. Marzo: This is one of the known football injuries. What happens is they make a tackle and the spine actually aligns. Those box cars line up straight whereas normally there supposed to have a little curvature which is its most stable position. And at impact, the spine will fail. It is a well described mechanism for catastrophic cervical spine and cervical cord injuries.

**On if what the difference between this injury and the one suffered by Mike Utley**

Dr. Marzo: I certainly don't know the details of Mike Utley's case. As you heard from Dr. Cappuccino with these incomplete injuries, they are very case specific. It would be very difficult to compare it case by case.

Dr. Cappuccino: That's exactly the case.

**On how his family is doing and what is being done for them**

Dr. Cappuccino: I met his mom and another family member at the hospital and escorted them to see Kevin to try to prepare them for his state. And after quite an initial, emotional letdown on his mom's part and the other young woman that was with him we were able to converse and explain to them exactly what we were doing, what our out terms and goals were and what could be the upside and downside of this. They were escorted to the facility by the Buffalo Bills organization and have been helped by the Buffalo Bills organization all the way through.

**On if he has shared with Kevin his thoughts**

Dr. Cappuccino: As I said, I'm born be to be an optimist but as a clinician and scientist, I never lie to my patients and Kevin is a patient of mine. I told Kevin that the chances for a full neurological recovery were bleak, dismal. With my clinical examination prior to surgical intervention, I felt it was less than five to 10% chance that he would ever regain a full utilization. I was slightly encouraged by this morning's result but I am cautiously optimistic having treated patients with similar injuries before. I've seen the results being very variable and most times the results are not good.

Dr. Cappuccino: He accepted what I told him and I indicated to him that surgery was his best alternative but it was an option. Kevin said do everything that you can to help me with this.