

# Introduction

Dr. Jeffrey Nordella  
Thank you for the invitation.

# Background

- I am the medical director at Porter Ranch Quality Care. We open in May 2009.
- I attended the University of California San Diego received a bachelor of science in human biology.
- I received my medical degree from the UCLA School of Medicine and trained in family medicine and emergency medicine.

# Disclosures

- I have not been contacted by any representatives from semper energy or the gas company.
- I am not part of any activist group.
- I have no financial incentives.
- I have no relationships with any legal firms. For transparency reasons, I was recently approached by a law firm that had offered to retain me, I politely refused.
- I wish to maintain neutrality.

# Health Screen Study

- Why? Simply, because no one else was.
- The study was not to prove or disapprove causation but only at best to identify associations.
- I started reviewing the chemicals/toxins that the community had been exposed too, at least the one that were announced publicly.
- I discovered a number of toxins had both an acute and chronic effect. Some which might not become evident until five years after exposure.
- Therefore, I recommended and implemented a baseline health screen.

# How was Health Screen Study performed

- I personally met exposed patients face-to-face and completed a present day history, a past medical history, and performed an physical exam.
- Specific baseline testing was performed.

# Baseline Lab Testing

- Complete blood count with differential known as a CBC with diff. This measures, in essence a patients bone marrow function.
- Metabolic chemistry panel was also obtained. This looks at the patient's blood sugar, electrolytes, thyroid function, renal function, and liver function.
- Two view Chest X-Ray.
- Pulmonary function testing.

# Exposure (Foundation)

- We all know that this gas blowout was the largest in history of this nation.
- We also know that this community was exposed to the components of natural gas as well as contaminant/toxins.
- What we don't know from a reliable unbiased source is exactly what we have been exposed too, how much, and for how long.

# What?

- I recently had a face-to-face meeting with the Los Angeles County Department of Public Health.
- It was disclosed that they themselves are unaware of the entire chemical composition of the gas.



# How much?

- In my opinion this as well has not been answered.
- The who, where, when, and by what technology? I am personally unaware.
- I am unaware of anyone discussing the scientific principle of dosing per bodyweight. This would clearly make pets, children, and then adults more susceptible in that order.
- Example: You would not give your child and adult dose of Tylenol because we know it would damage their liver.

# How long?

- This topic is complex in itself.
- Was their chronic exposure prior to the blowout? If so, again, What? How long? How much?
- Then came the peak exposure from the acute blowout.
- Followed by the re-release of gases into the community through the erosion of soil. And now we are seeing a secondary spike in patient symptomatology.

# Chemicals

- Methane
- Mercaptan
- Hydrogen Sulfide
- Benzene(VOC)
- Radon
- Metals

# Metals

- Manganese
- Strontium
- Lead
- Aluminum
- Other?

# Methane side effects

- Headache
- Dizziness
- Fatigue
- Shortness of breath/cough
- Nausea/vomiting

# Benzene side effects

- Cough
- Dizziness
- Headache
- Nausea/Vomiting
- Palpitations
- Bone marrow suppression: anemia, leukemia, and aplastic anemia.

# Mercaptan

- Headache
- Dizziness
- Nausea/vomiting/diarrhea
- Pulmonary irritation
- Cough/wheezing
- Increased heart rate/palpitations
- Eye and mucous membrane irritation
- Dermatitis

# Hydrogen Sulfide side effects

- Cough/shortness of breath
- Eye irritation
- Fatigue
- Nausea/vomiting
- Pulmonary edema
- Headache(vasodilator)



# Radon

- Radioactive Atom
- Decay 3.8 days
- Gives off radiation from the nucleus of the atom which potentially causes DNA mutation to the human cell.
- Has been associated with chronic lymphocytic leukemia (CLL).
- Exposure is associated with lung cancer mainly in smokers and former smokers.

# Lead

- Abdominal pain
- Constipation
- Headache
- Irritability
- Tingling in hands and feet
- Associated with anemia and central nervous system disorders.

# Aluminum

- Contact dermatitis
- Associated with estrogen related illnesses.  
Example: estrogen influenced breast cancer

# Manganese

- Parkinson like syndrome (Manganism)
- Associated with central nervous system disease.

# Strontium

- Potentially affects bone growth.

# Cumulative affect

- There is no study/documentation that I can find in the literature that addresses the human response after being exposed to all of these chemicals, at one time!
- Yet there a particular parties that will tell you that they are harmless and should not have a long-term effect.

# Cross Reference Symptoms

- Headache: 4 out of 4, 1 metal
- Cough/shortness of breath: 4 out of 4, 1 metal
- Dizziness: 3 out of 4
- Fatigue: 2 out of 4, 1 metal
- Rash: 2 out of 4, 1 metal
- Nausea/vomiting: 4 out 4, 2 metals

# The Health Screen Study

- Initiated in January 2016 approximately 10 weeks after the blowout.
- New study group is forming in January 2017.
- 53 patients involved
- 31 females and 22 males
- Ages span from 11 through 80
- Concentration of patients are between the age of 40 and 60's



# Health Screen Study

- 52 of 53 patients had symptoms.
- Only one patient was without symptoms.
- 52 of 53 patients had two or more symptoms.
- 52 of 53 patients had symptoms within two weeks of the blowout.
- Mileage from the Aliso Canyon complex range between one mile to five miles.
- The residents were located in a pattern from Southwest to South to Southeast almost on an equal distribution.

# Health Screen Study

- 54% of the patients involved in the study had a past medical history and are taking medications.
- The most common pre-existing medical conditions: hypothyroidism, hypertension, and hyperlipidemia.
- 46% of the patients are healthy with no past medical history whatsoever and are not taking medications.
- Three patients had been diagnosed prior with cancers. Breast, lymphoma, and esophageal carcinoma.

# #1 Presenting symptoms

- Cough: 42 of 53 patients or 79.2% presented with a non-productive cough with a duration greater than four weeks.
- I removed all potential other causations of chronic cough, that being a history of smoking, seasonal allergies, cardiopulmonary disease such as asthma or COPD, and or medications.
- 39 of 53 patients or 73.5% had no identifiable causation for a chronic cough.

# #2 Presenting Symptom

- Headache: 40 out of 53 or 77%

# Classical Migraine Headaches

- Possible aura(Visual disturbance)
- Unilateral headache
- Hypersensitivity to sound
- Photophobia
- Nausea/vomiting

# Characteristics of Headache from exposure

- No aura
- Headache was global or bilateral
- No sensitivity to sound
- No photophobia
- Some patients had a headache without nausea or vomiting.

# Headaches

- Of the 40 patients that had headaches only four had a prior history of migraine.
- All four patients that had prior history of migraines complained that their migraines had increased in severity and duration requiring Botox administration for control shortly after the blowout.

# Other Common Symptoms

- Nose bleeds 34.6%
- Dizziness 28.8%
- Nausea/Vomiting/Diarrhea 23%
- Eye irritation 13.4%
- Rash 11.5%



# Other Uncommon Symptoms

- Tingling of hands
- Tingling of tongue
- Forgetfulness
- Dry mouth

# Uncommon Symptoms

- Throat irritation
- Loss of voice
- Concentration issues
- Dry eyes
- Tearing eyes

# Uncommon Symptoms

- Chest tightness
- Joint pain

# Physical Findings and laboratory data

- I have not fully assessed all physical findings and laboratory data as of yet.
- I do want to comment though on the evidence of nosebleeds.
- When appropriate I have documented a significant number of nasal exams showing past evidence of mucosal injury and bleeding.

# The word is spreading

- I receive approximately 10+ phone calls a day.
- I've been noting information of case after case. Granted these are not patients that I have seen face-to-face but yet just of taking historical information. These are diagnosis made by other physicians and or facilities.
- There are numerous cases which I feel are very significant to the subject matter.

# Case Presentations

- 12-year-old female diagnosed with aplastic anemia (Bone marrow failure)
- Incidence: 3 patients per 1 million population (not stratified by age)
- Literature documents an association between benzene and aplastic anemia.

- Seven-year-old female diagnosed with Leukemia, AML (acute myelogenous leukemia)
- AML is most common in adults approximately 90%
- Incidence 7 cases for 1 million patient population.
- Stratified for age, lowest incidences ages 4-10.
- Literature documents an association with benzene.

# Other Cases

- Central nervous system demyelination syndrome
- Recurrence of non-Hodgkin's Lymphoma
- Pancytopenia(malfunction of the bone marrow).
- Pulmonary arterial hypertension
- Pediatric anemia's
- New onset seizure disorders
- New onset asthma



- Hair loss both in adults and children.
- Unexplained Rashes
- This all in a population of approximately 30,000.
- I believe we are just scratching the surface and there is much more to discover.
- We need cooperation and collaboration.

# Recommendation

- For clarification I am not stating a causation, that would not be scientifically appropriate.
- There needs to be a larger patient population studied in order to accurately represent the exposed community.
- I recommend a more in-depth unbiased professional study be performed.
- It would be negligent to move forward re-pressurizing the field without it.

# Conclusion

- Ideally, in order to come to a conclusion of causation scientifically, one would like to compare the incidence of illness/disease within an unexposed community. For obvious reasons this has its difficulties.
- I can attest from first-hand experience as the medical director of an urgent care family practice office in an adjacent community that I have never seen patients symptoms with such disarray from the norm.
- Thank you