

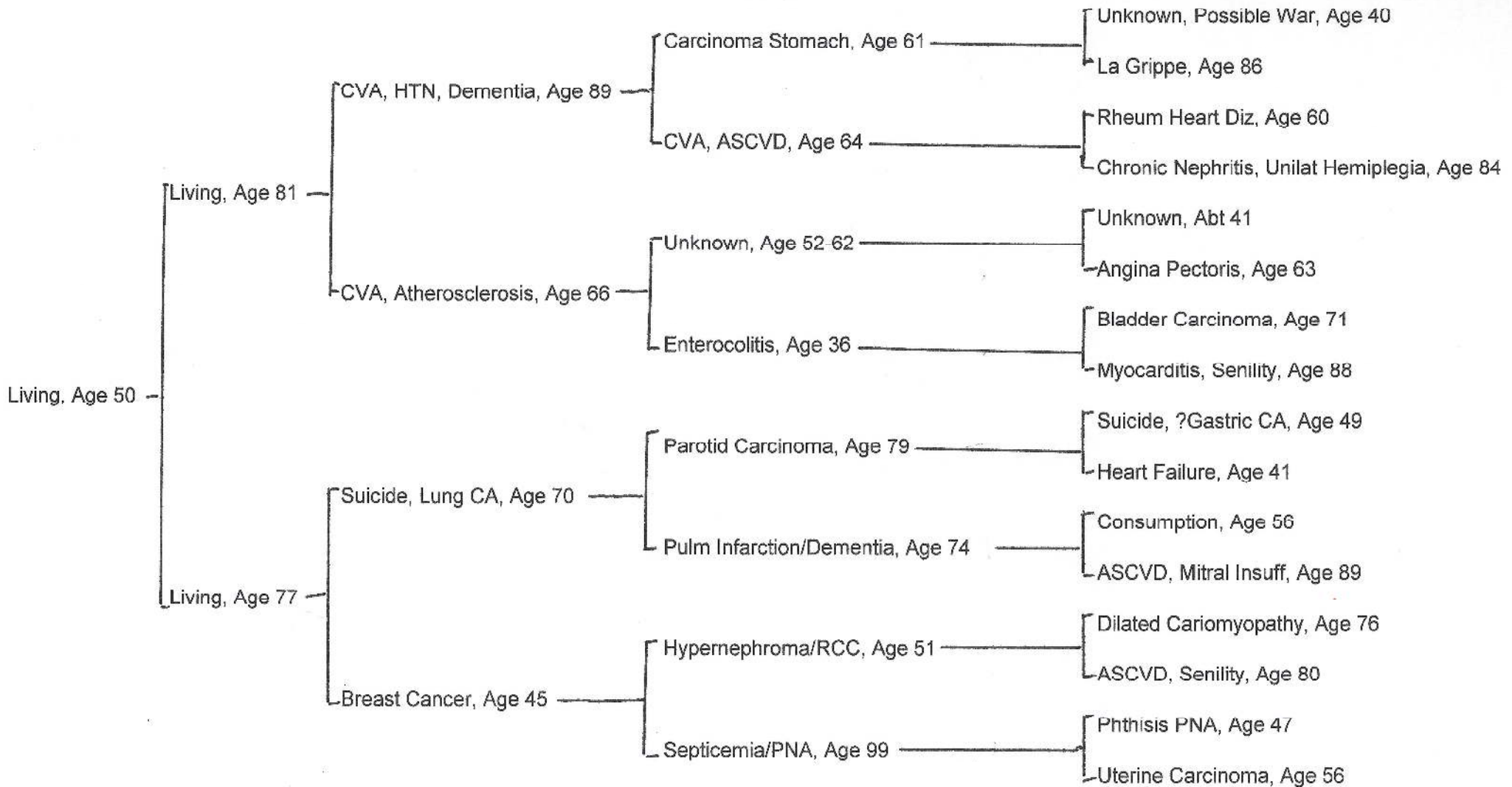
# Medical History of George Washington



*Matthen Stiles Bowdish, M.D.*

*Delta Chapter - CASSAR, November 19, 2022*

# Cause of Death Family Tree



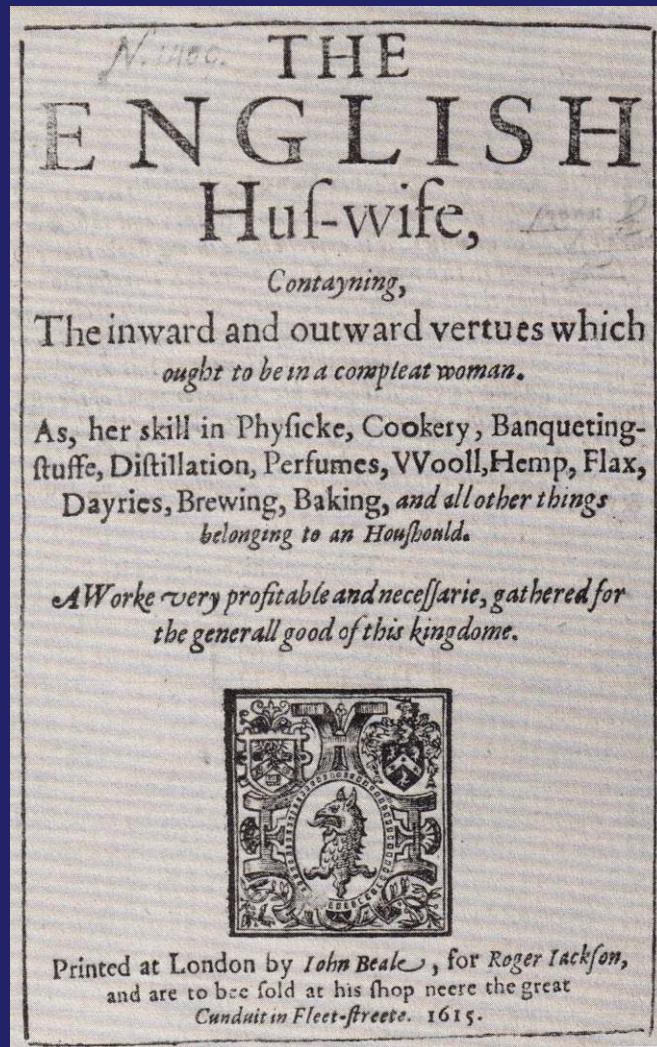
# Outline

- I. Intro to Colonial Era Health
- II. Principles & Treatments
- III. Inoculation
- IV. George Washington

# Health Care Delivery in the 17<sup>th</sup>-18<sup>th</sup> Centuries

- Most people received their health care at home.
- Treatments included nutrition, herbal remedies, even minor surgery.
- Medicine was primarily learned from family and through popular medical books of the day.
- Medical professionals were limited in number.
- Hospitals were non-existent except in cities or when affiliated with military forces.

# *The English Housewife* by Gervase Markham



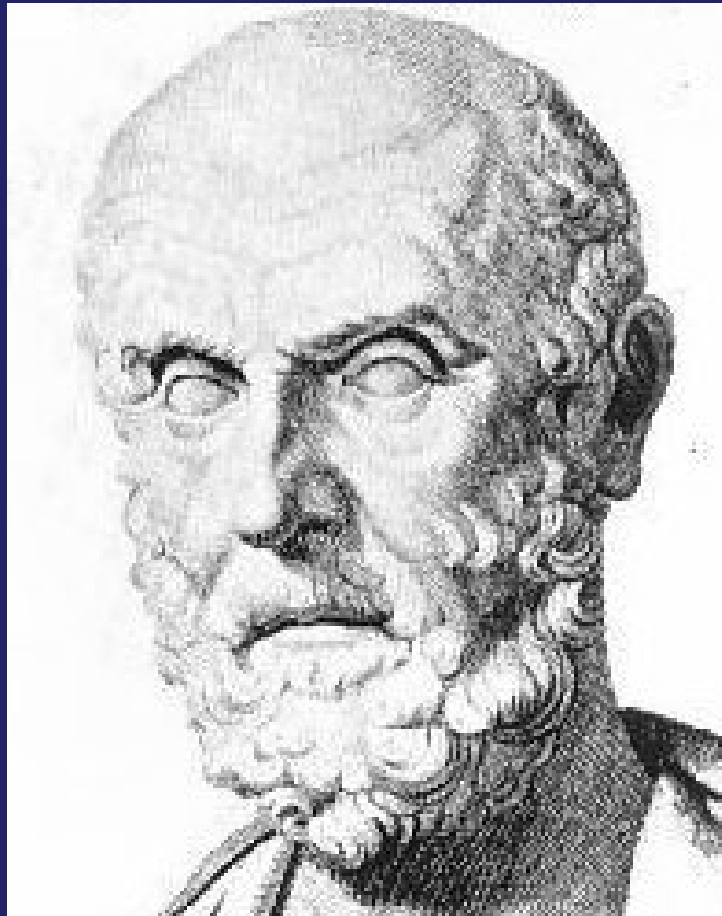
Chapter 1: "House-hold Physicke"  
"Of the inward virtues of the mind  
which ought to be in every housewife.  
And first of her general knowledges  
both in physic and surgery, with  
plain approved medicines for health  
of the household, also the extraction  
of excellent oils for those purposes."

# *The English Housewife* by Gervase Markham

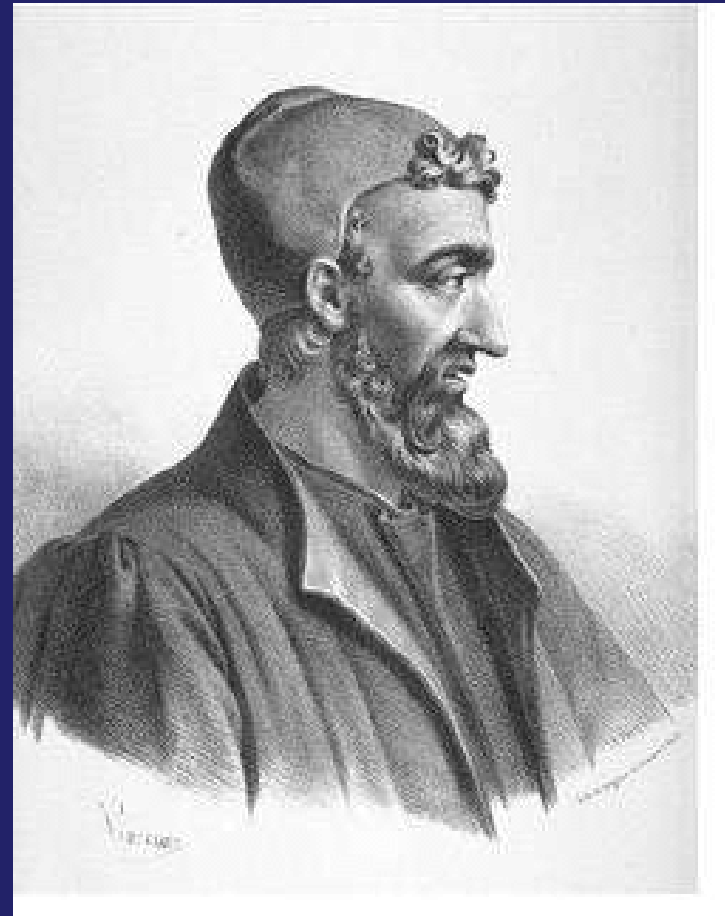
- *For the headache:* You shall take of rose water, of the juice of camomile, of woman's milk and of strong wine vinegar.



When doctors were involved, they were often taught by the writings of these men



Hippocrates  
(460BC-370BC)



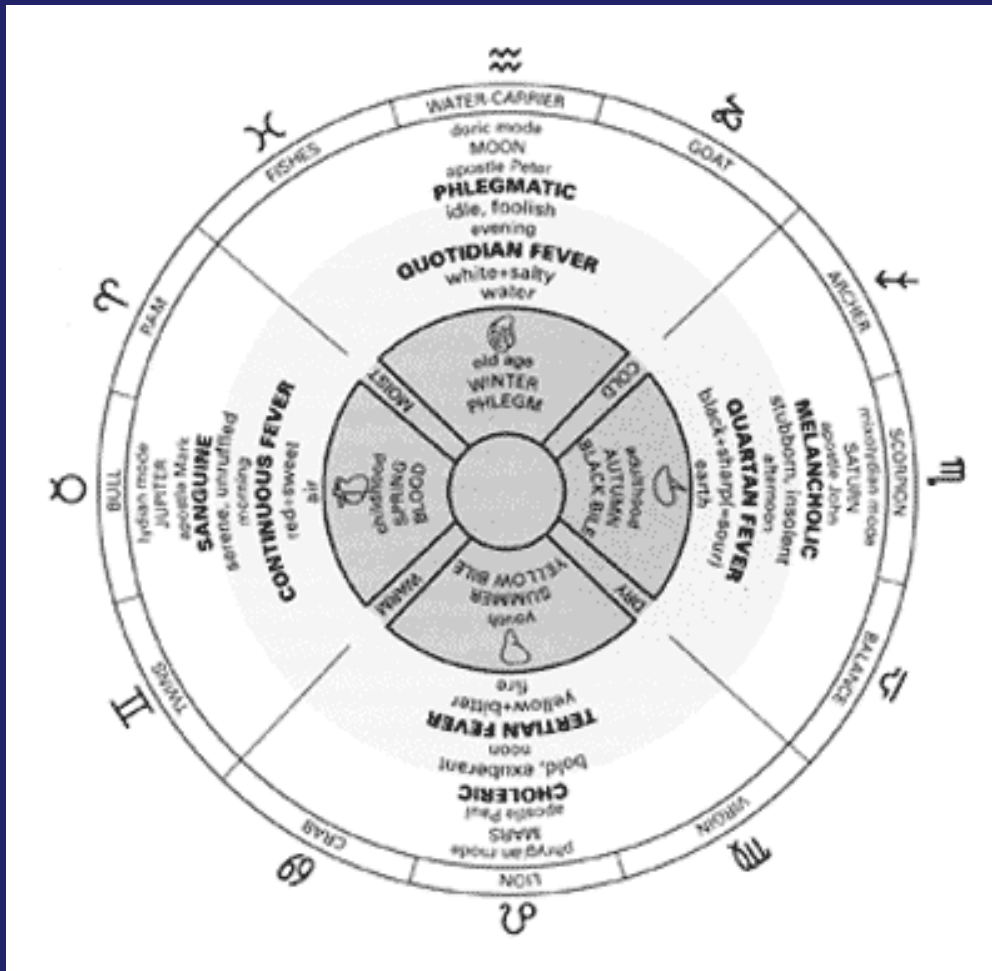
Galen  
(129AD-200AD)

# Galenic Medicine

- Based on Aristotle's writings on four elements (Earth=cold, Air=dry, Fire=hot, Water=wet)
- Galen felt these elements corresponded with "four humors" (phlegm, black bile, yellow bile, blood).
- Disease was due to an imbalance of humors
- Treatment primarily herbs & expunging bad humors via phlebotomy, cupping or purgatives.



# Four Humors



Humour	Season	Element	Organ	Qualities	Ancient name	Modern	MBTI	Ancient characteristics
Blood	spring	air	liver	warm & moist	sanguine	artisan	SP	courageous, hopeful, amorous
Yellow bile	summer	fire	spleen	warm & dry	choleric	idealist	NF	easily angered, bad tempered
Black bile	autumn	earth	gall bladder	cold & dry	melancholic	guardian	SJ	despondent, sleepless, irritable
Phlegm	winter	water	brain/lungs	cold & moist	phlegmatic	rational	NT	calm, unemotional

# Cupping, Cataplasms & Purgatives, Oh My!



Cupping/blistering



Purgatives- Emetics  
& Laxatives

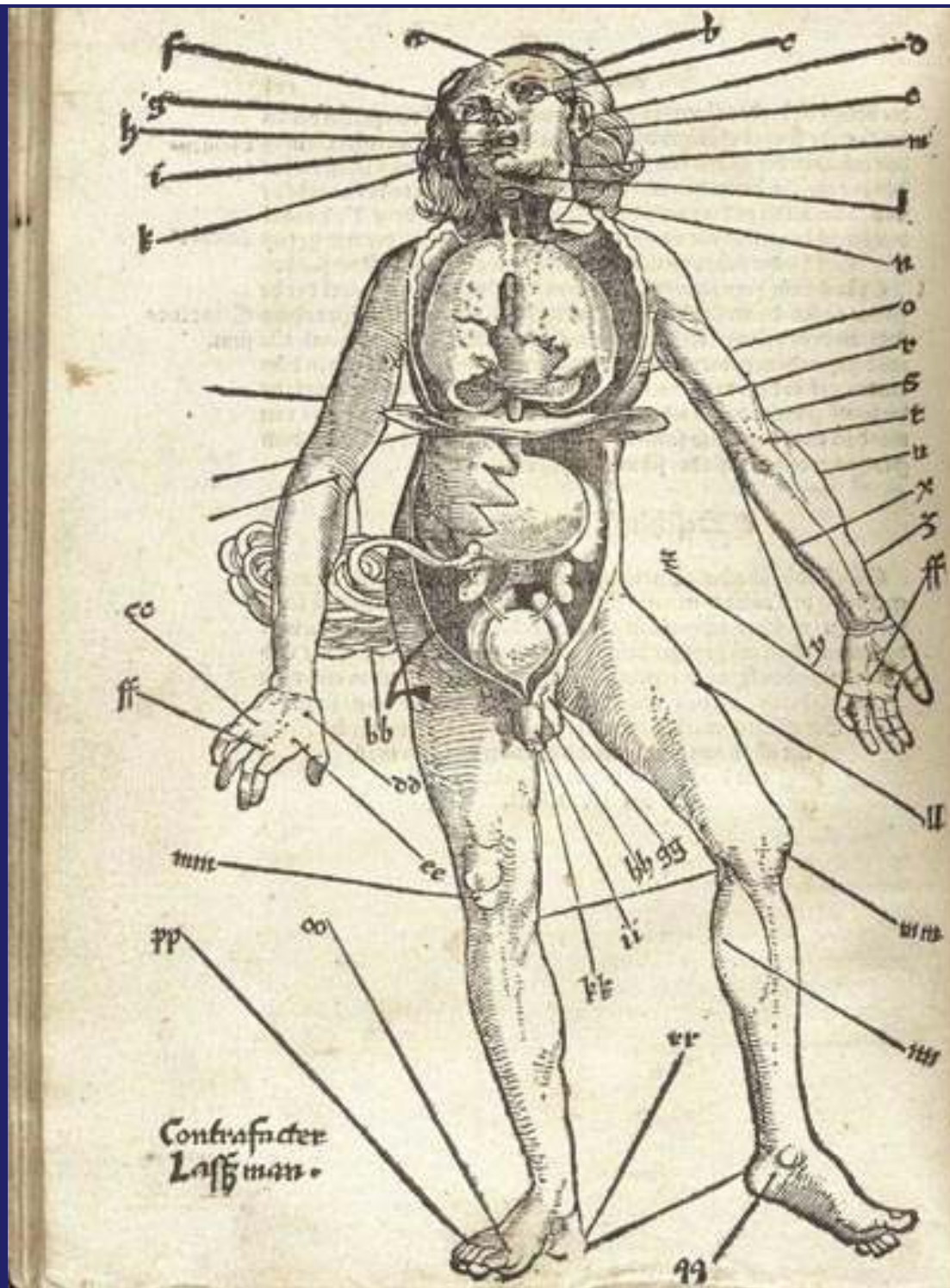


Poultice/Cataplasm



# Venesection





*Hans von Gersdorff's Feldtbuch der Wundartzney, published in 1528*

# Short, Nasty & Brutish

## DISEASES and CASUALTIES.

<b>A</b> Bortive and Stilborn 637	Fistula ————— 17	Rash ————— 2	<b>CASUALTIES.</b>	
Aged ————— 1781	Flux ————— 32	Rheumatism ————— 29		
Ague ————— 10	French Pox ————— 90	Rickets ————— 74		<b>B</b> Broken Leg ————— 3
Apoplexy and Suddenly 237	Gout ————— 38	Rifing of the Lights— 34		Burnt ————— 3
Asthma and Tiffick — 573	Gravel, Stone, and } 52	St Anthony's Fire — 2		Choaked with a Cherry 1
Bedridden ————— 3	Strangury ————— } 52	Scald Head ————— 2		Drowned ————— 98
Bleeding ————— 5	Grief ————— 14	Small Pox ————— 1197		Excessive Drinking — 38
Bloody Flux ————— 13	Gripping in the Guts— 273	Sores and Ulcers ——— 45		Executed ————— 25
Bursten and Rupture— 22	Headmoldshot, Hor- } 81	Spleen ————— 5		Found dead ————— 37
Cancer ————— 50	shoehead, and Wa- } 81	Stoppage in the Stomach 197		Fractured Skull ——— 1
Canker ————— 14	ter in the Head } 81	Surfeit ————— 4		Killed by Falls and } 55
Childbed ————— 219	Jaundies ————— 117	Swelling ————— 1		several other Acci- } 55
Cold ————— 1	Impossthume ————— 31	Teeth ————— 1361		Killed by the Bite of } 2
Colick and Twisting } 52	Inflammation ————— 19	Thrush ————— 65		a mad Dog ————— } 2
of the Guts ————— } 52	Itch ————— 2	Tympany ————— 6		Made away themselves 52
Consumption ————— 3719	Leprosy ————— 2	Vapours ————— 1		Murdered ————— 11
Convulsion ————— 7428	Lethargy ————— 13	Vomiting and Loosness 26		Murdered in the Pillory 1
Cough and Hooping } 65	Livergrown ————— 9	Worms ————— 11		Overlaid ————— 133
Cough ————— } 65	Lunatick ————— 25			Scalded ————— 2
Diabetes ————— 5	Measles ————— 30			Smothered, Strangled } 3
Dropfy ————— 945	Miscarriage ————— 3			or Suffocated ————— } 3
Evil ————— 19	Mortification ————— 149			Starved ————— 1
Fever, Malignant Fe- } 2939	Palsy ————— 30			
ver, Scarlet Fever, } 2939	Pleurisy ————— 55			
and Purples ————— } 2939	Quinisy ————— 11			



CHRISTENED { Males — 9144  
Females 8644  
In all — 17788

BURIED { Males — 11655  
Females 11703  
In all — 23358

Decreased in the Burials this Year 1904

Whereof have died,

Under Two Years of Age 9502	Twenty and Thirty 1627	Sixty and Seventy— 1581	A Hundred ————— 3
Between Two and Five— 1517	Thirty and Forty — 2175	Seventy and Eighty 974	A Hundred and One — 3
Five and Ten ————— 716	Forty and Fifty ——— 2121	Eighty and Ninety— 660	A Hundred and Two — 4
Ten and Twenty ————— 611	Fifty and Sixty ——— 1741	Ninety and a Hundred 121	A Hundred and Five— 2

*A Collection of the Yearly Bills of Mortality 1657 to 1758 Inclusive, 1732*

# Colonial life expectancy in the 1600s-1700s

- 17th-century English life expectancy was only about 35 years, due to infant and child mortality.
- Life expectancy was under 25 years in the early Colony of Virginia.
- In seventeenth-century New England, about 40 per cent died before reaching adulthood.

# Back to George Washington





What physical characteristics do we associate with George Washington?

*A Robust American Cincinnatus?*



*Washington by Charles Willson Peale, 1776*

*Even a little chunky?*

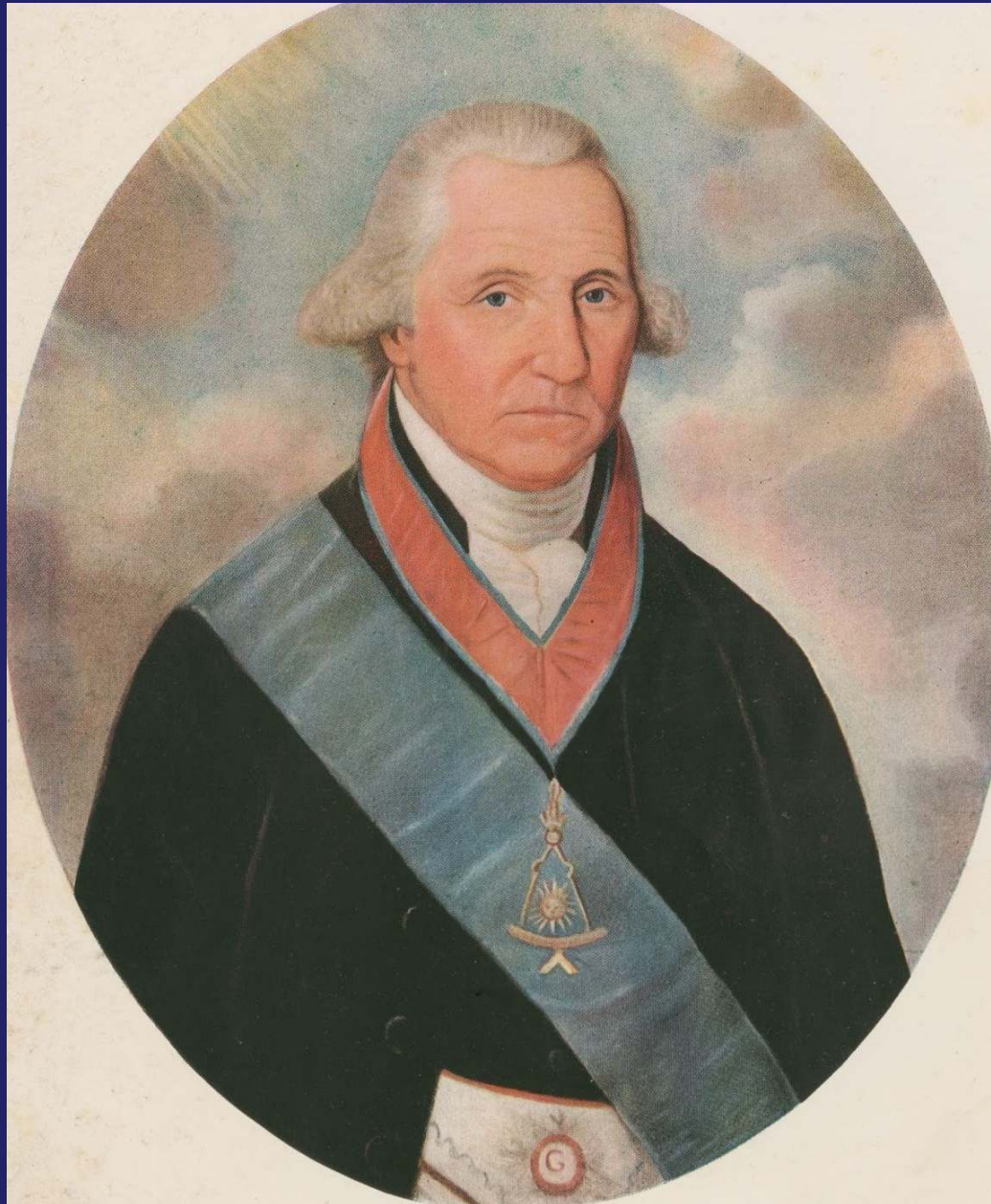


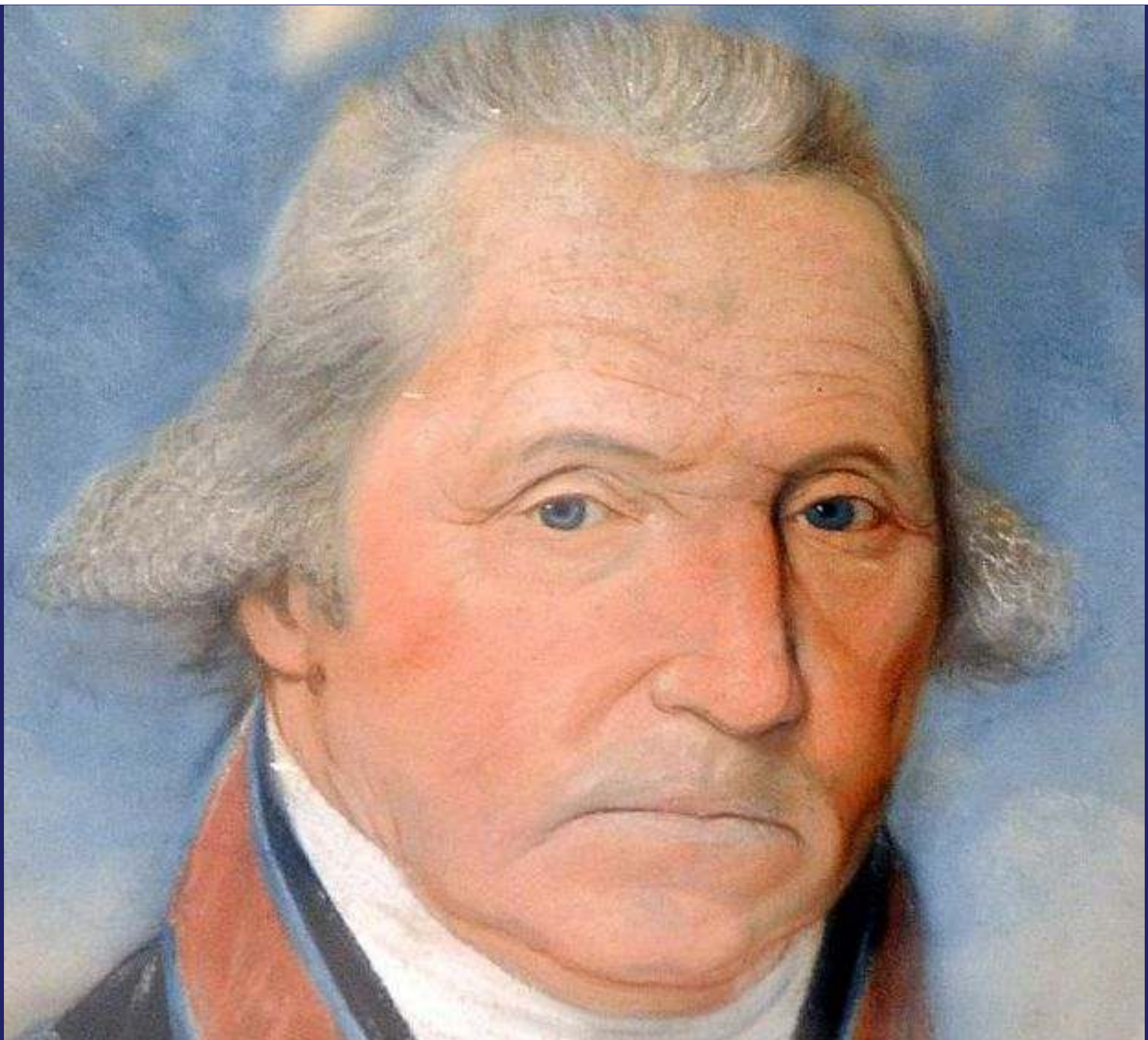
*Artist: Joseph Wright, 1783*

1794 – Washington by Adolf  
Wertmuller



# Washington by William Williams, 1794





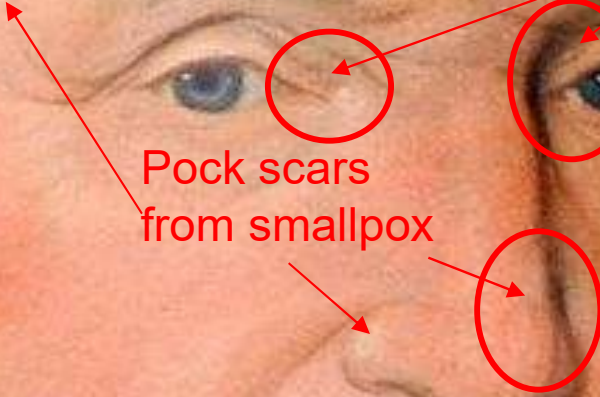
Mottled skin, sun damage & some nevi



Sebaceous keratosis or syringiomas



Pock scars from smallpox



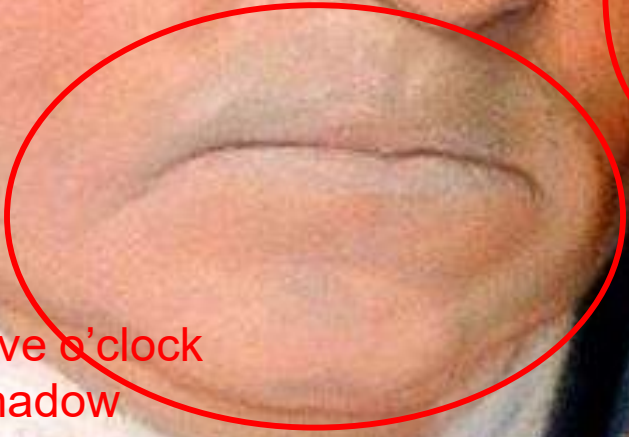
Mole vs basal cell carcinoma



Scar on left cheek from excised tooth abscess



Five o'clock shadow



# Washington Family Medical History

- Great-grandfather John Washington came from Essex to VA in 1656, died age 46 from respiratory ailments
- Paternal great-grandmother Anne Pope died at 33 of unknown cases
- Grandfather Lawrence Washington died aged 37 from respiratory disease
- Paternal Grandmother Mildred Warner died at age 30 of unknown cases
- Father Augustine Washington died at age 48, from “gout of the stomach.”
- Mother Mary Washington died of breast cancer at 81



Augustine



# Washington's Early Years

- By age of 15 had measles, mumps and “*black canker*” (diphtheria)
- Qualified as a surveyor through William & Mary College in 1747
- Acquired the “*ague*” (malaria) while surveying the swamps surrounding Alexandria, Virginia
- Treated with Peruvian Jesuit Bark (cinchona), which contained quinine
- Hearing loss possibly related to large doses of cinchona

# Lawrence Washington (1718-1752)



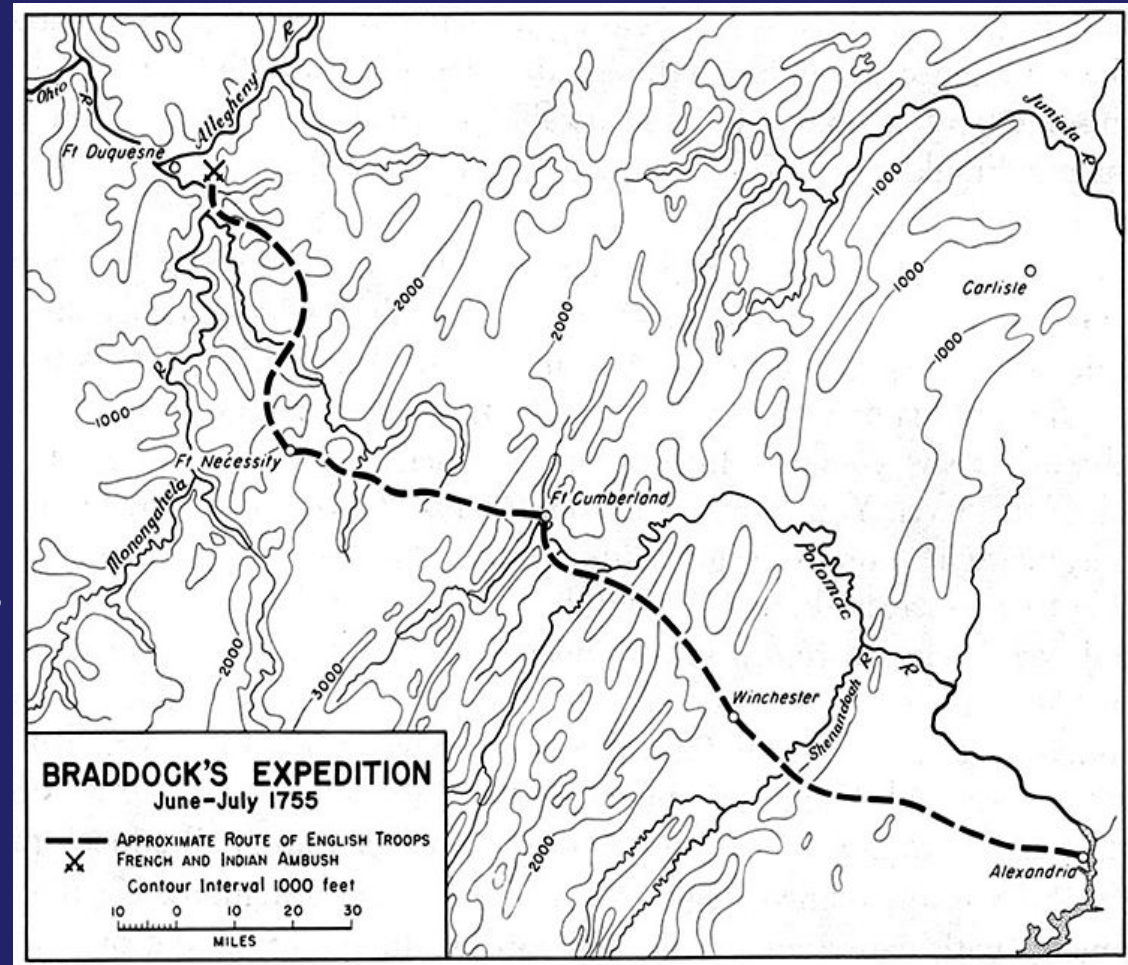
# Barbados and Smallpox

- In 1751, George accompanied his half-brother Lawrence to Barbados in the hope of treating Lawrence's tuberculosis
- Contracted smallpox during his stay



# Washington During the French & Indian War

- During French & Indian War, Washington served on staff of Maj General Edward Braddock to capture French Fort Duquesne (1755)
- Developed “bloody flux” (dysentery) and left behind by Braddock’s front echelon. Treated with “Dr James Powders” (salt, mercury, bark)

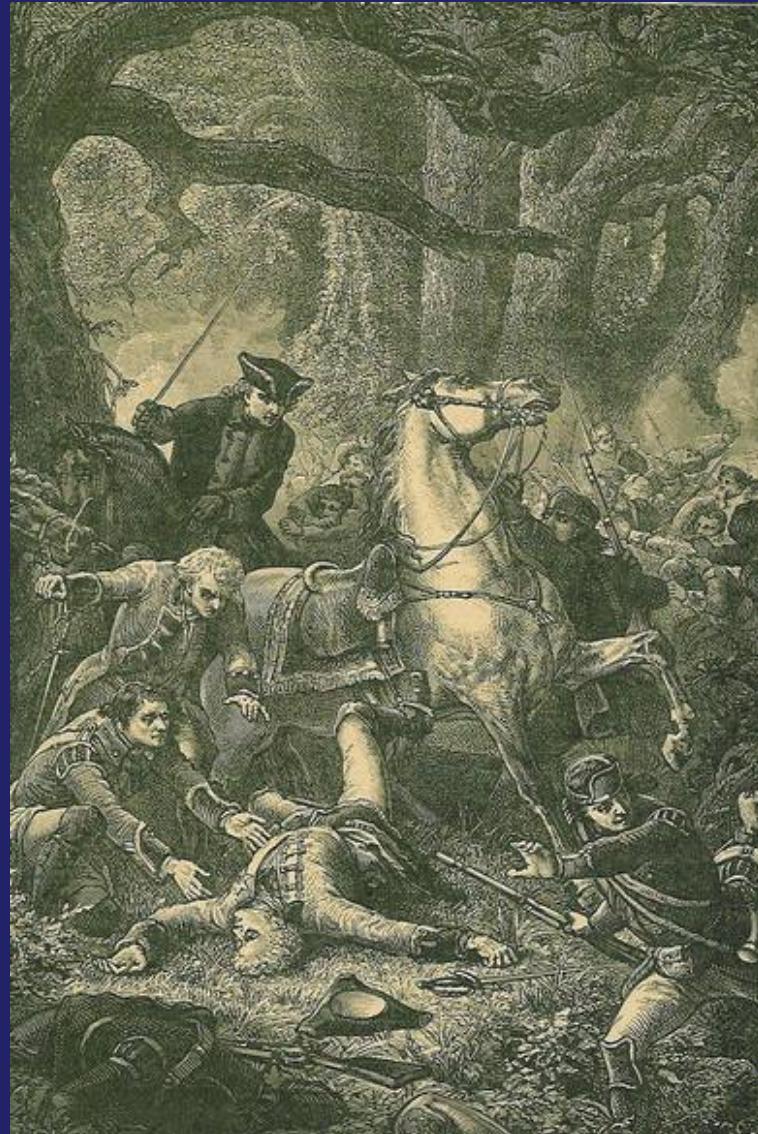


# Battle of the Monongahela

- Regained health and carried by covered wagon to fight at the Battle of the Monongahela
- Despite having two horses shot out from under him and four bullet holes in his uniform, he escaped battle unscathed



# Battle of the Monongahela



Maj General Braddock was not so fortunate

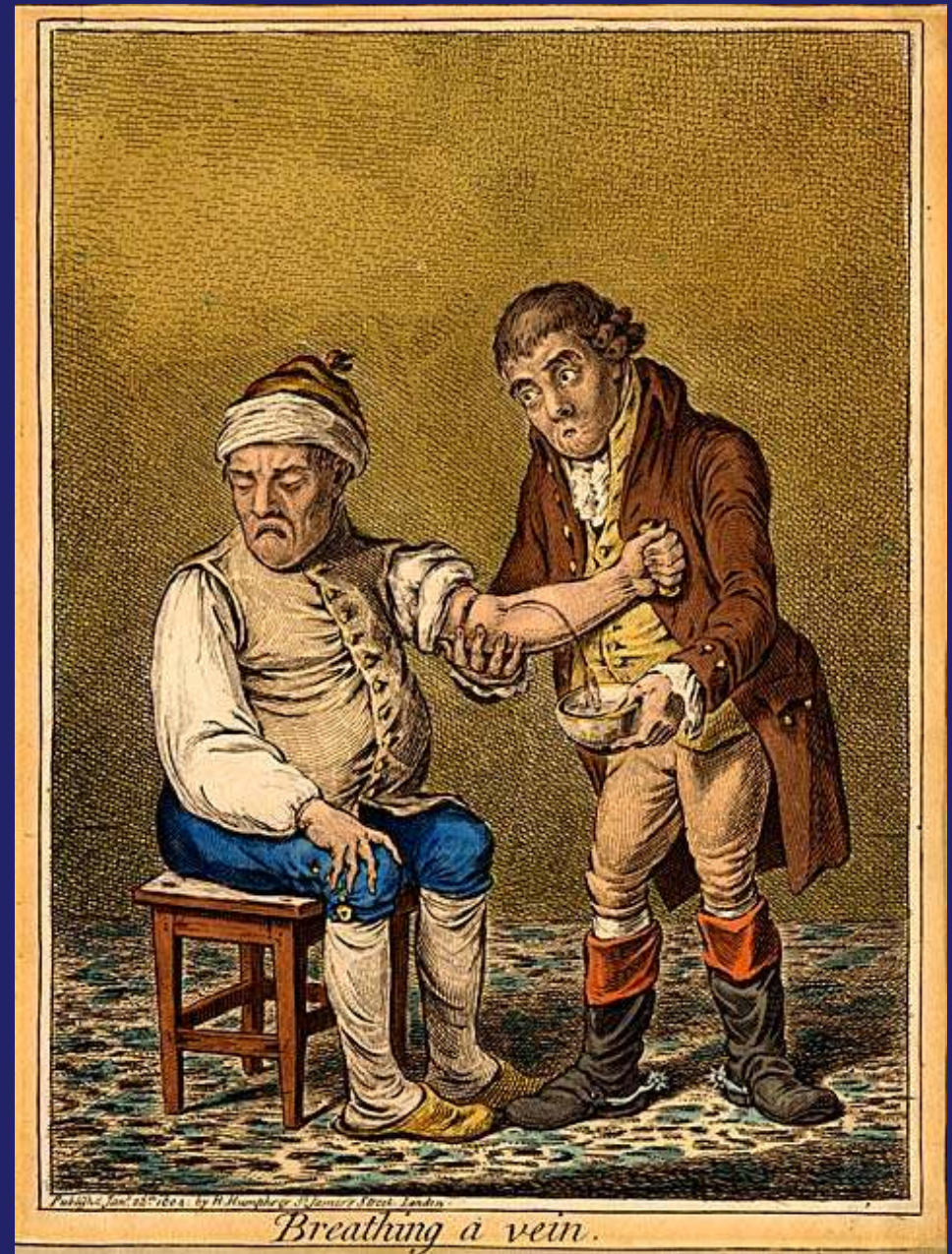
# A Young & Brooding Washington

- Afflicted by chronic diseases and bouts of depression
- Fell in love with Sally Cary Fairfax, a married woman
- 1757-58 Four months with the “flux with pleurisy & fever.”
- He was ridiculed for not being able to serve (persecution complex)



# Dr. Washington?

- In 1764, Washington imported medical texts from England and began to practice medicine on his slaves and family members like stepdaughter Patsy.
- Set up infirmaries
- Inoculated slaves for smallpox
- At this time, he first learned how to perform venesection (blood-letting)





# Washington During the Revolution



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185 NASSAU ST. NEW YORK.

**WASHINGTON TAKING COMMAND OF THE AMERICAN ARMY.**

At Cambridge, Mass. July 3<sup>rd</sup> 1775.

## REPORT OF MEDICAL HISTORY

THIS INFORMATION IS FOR OFFICIAL USE ONLY AND WILL NOT BE RELEASED TO UNAUTHORIZED PERSONS


1. Last Name - First Name - Middle Name <b>Washington, George</b>		2. Grade or Position <b>Commander-in-Chief Continental Army</b>		3 - Identification No. <b>1</b>	
4. Home Address, Street or RFD, Town or City, State <b>Mount Vernon, Virginia</b>			5. Purpose of Examination <b>Active Duty</b>		6. Date of Examination <b>15 June 1775</b>
7. Sex <b>Male</b>	8. Race <b>White</b>	9. Total years Govt. Service <b>22</b>	10. Department/Agency/Service <b>Virginia Militia</b>		11. Organization Unit
12. Date of Birth <b>22 Feb. 1732</b>		13. Place of Birth <b>Bridges Creek, Va.</b>		14. Name, relationship of next of Kin <b>Martha Danridge Custis Washington, Wife</b>	
15. Examination Facilities or Examiner and Address <b>Dr. Benjamin Rush, Medical Director</b>			16. Other Information <b>On request of Continental Congress</b>		

17. Statement of Examinee's Present Health in own words (followed by description of past history, if complaint exists)

**At present in good health, malaria, 1749; small pox 1751; Tubercular pleuriary, 1751 to 1752; influenza, 1755; malaria 1754; dysentery, 1757, malaria 1761; dysentery, 1767**

18. Have you ever had or have you now (place check a left of each item).

yes		no		(CHECK EACH ITEM)		yes		no		(check each item)		yes		no		(check each item)	
?																	

Examinee **George Washington** Signature 

Physician's summary and elaboration of all pertinent data (Physician shall comment on the examinee)

**Subject of this report has a family hostry of active tuberculosis and he was exposed to it. He has a personal history of tuberculosis, recurrent malaria and dysentery. He is highly susceptible to colds and apparently has chronic infected tonsils. He has severe tooth trouble and is probably unable to chew any hard foods properly. It is likely that the demands of field duty would reactive his arrested tuberculosis and his latent malaria.**

**Subject cannot be recommended for active duty in the field.**



Type or Print name of physician or examiner  
**Dr. Benjamin Rush**

Date  
**15 June 1775**

Signature  


# Siege of Quebec, 1775

- Unable to capture Quebec
- Siege plagued by smallpox
- Washington ordered inoculation for all Continental troops starting in 1776



Gen John  
Thomas



Sir Guy  
Carlton

# Valley Forge



# Grim Statistics of Valley Forge

- 10,000 troops arrived in December 1777
- Soldiers housed in makeshift tents before 14'x16' huts constructed. Each held 12 soldiers.
- 4000 initially without blankets
- 2500 never had a blanket
- 30% suffered disease
- Frostbite, gangrene, smallpox, typhoid, typhus, pneumonia, dysentery
- 2500 died

# Dental Hygiene

- Washington would have owned dental implements like these found at Mt Vernon in the 1790s
- Washington blamed defective teeth on cracking walnuts as child
- 1<sup>st</sup> tooth pulled at age 22
- Had 1 tooth left by the time he became president



# The General's Chompers

Never made of wood

Dentures made of human teeth and fashioned from whalebone and hippopotamus teeth

Saved extracted teeth & bought teeth from slaves (*9 teeth for 122 shillings*) for ?dental implant surgery

One of his dentists was Paul Revere

Teeth clicked, did not smile



# Presidential Health

- In 1789, six months after inauguration developed fever, chills, cramps and was found to have an anthrax carbuncle on his leg. Surgery for removal w/six weeks recovering in bed
- Also developed conjunctivitis and pneumonia.
- Unable to perform duties for 109 days!





# Washington Returns to Mt. Vernon



March 5, 1797

# Washington's Final Days

- Thursday, December 12, 1799
  - Inspected lands in snow, hail and freezing rain
  - Arriving at home late, he did not change clothing before supper
  - Developed sore throat and dysphonia
  - He retired early, noting he was suffering from a cold
- Friday, December 13, 1799
  - More dysphonia and developed a cough
  - Retired early

# Washington's Final Days

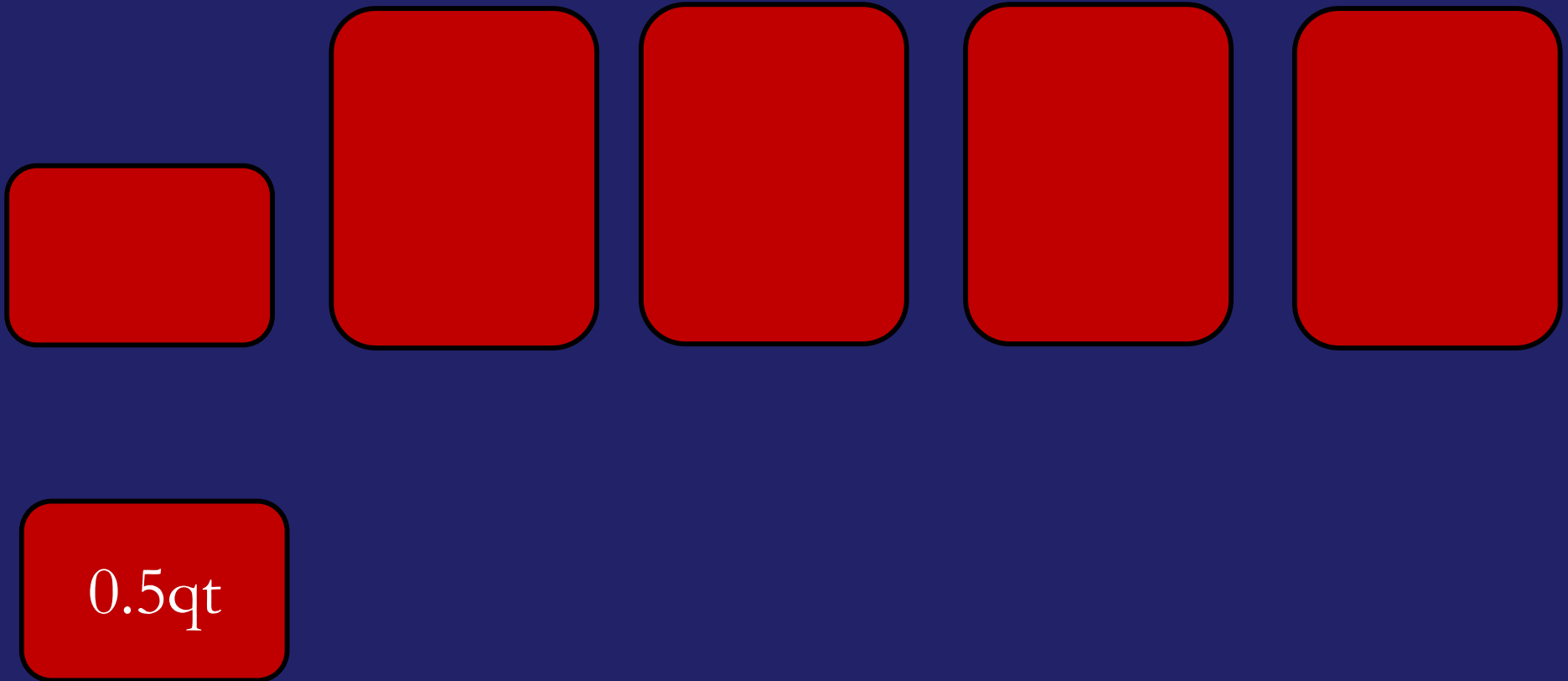
- Saturday, December 14, 1799
  - 0200hrs: awoke with sore neck, stridor and fever. Martha called for Tobias Lear.
  - 0700hrs: farm overseer George Rawlings called by Washington to let blood and apply blisters.  $\frac{1}{2}$  quart removed despite Martha's objections. Also gave formula of molasses, butter and vinegar. No improvement.



Tobias Lear

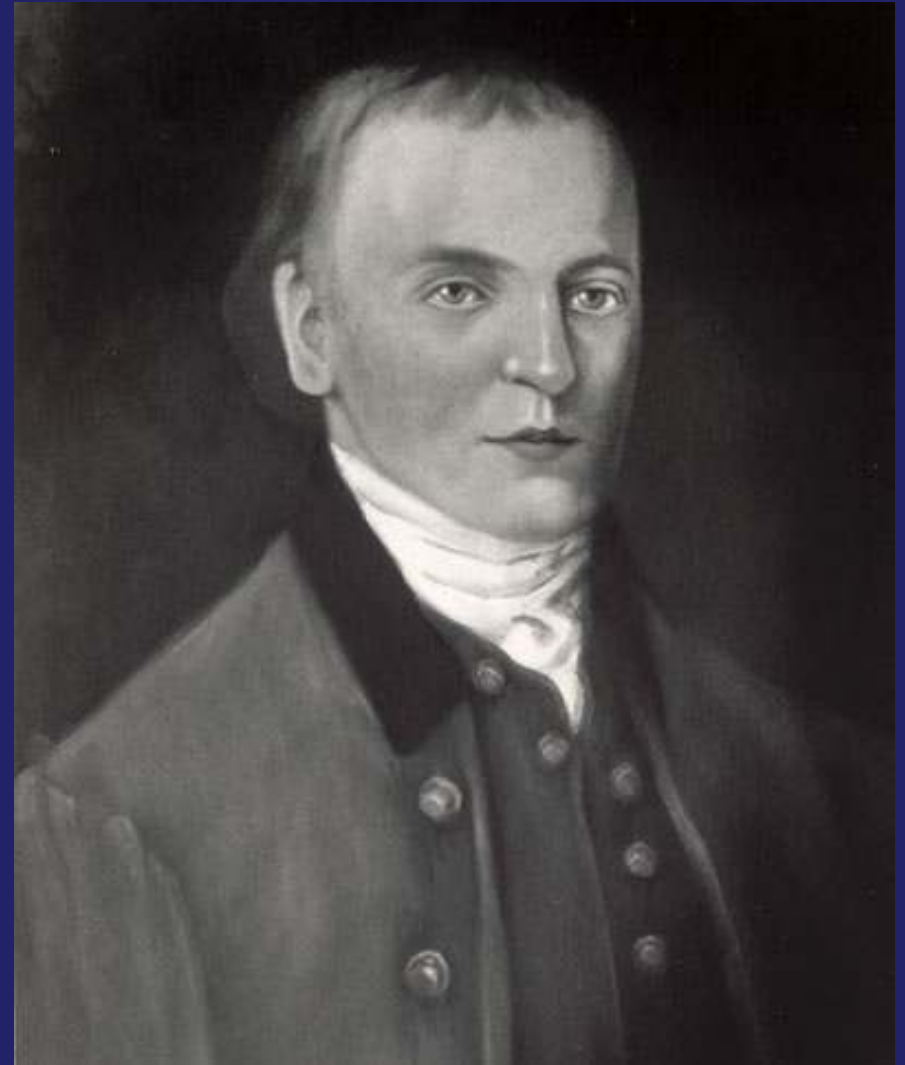
# Total Blood Volume for 70kg man

A little over 5 quarts



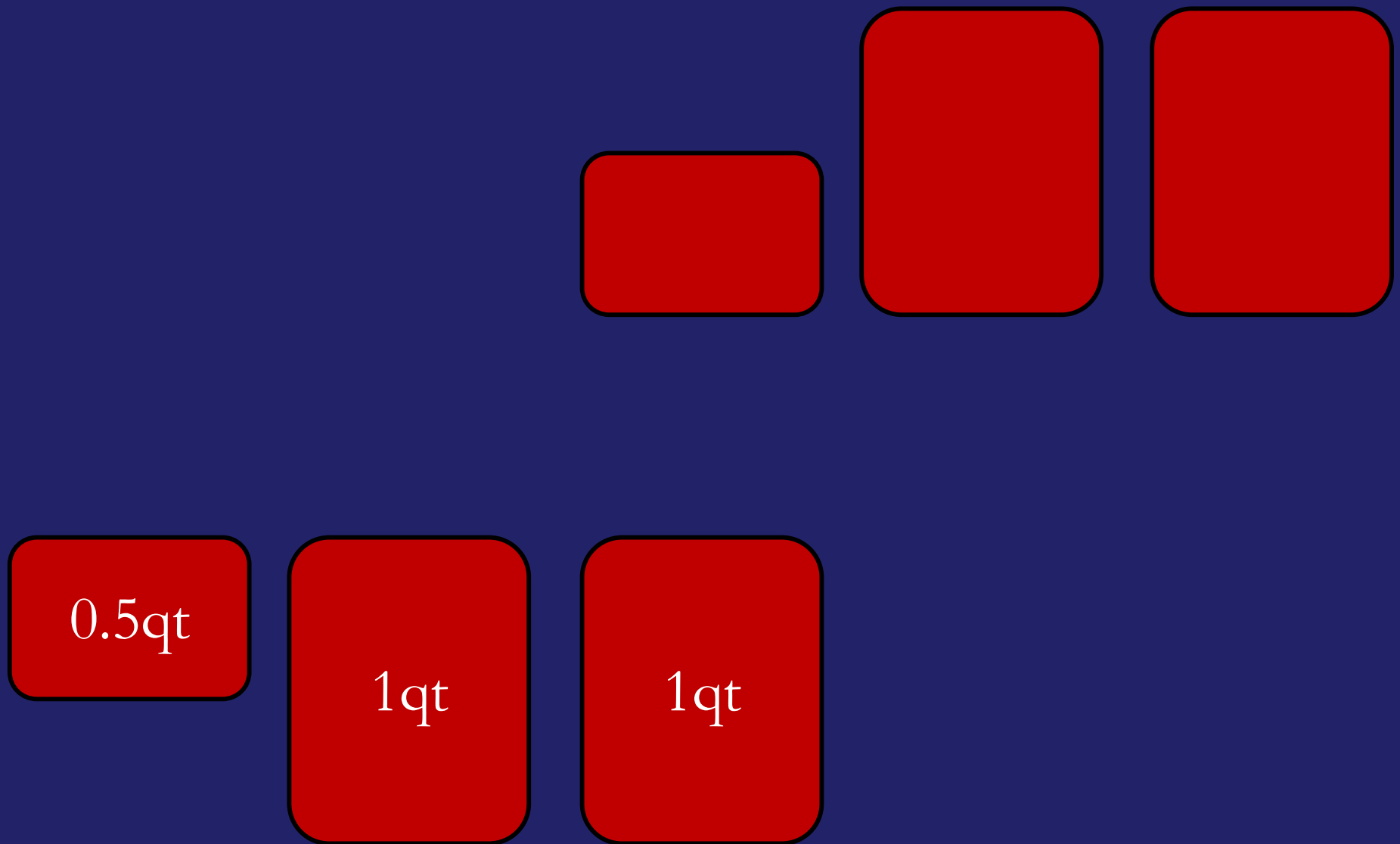
# Saturday, December 14, 1799

- 0900hrs: Friend and Surgeon General Dr. James Craik arrives at Mt. Vernon. Initiates another bloodletting of 1 qt. No improvement.
- 1100hrs: Craik bled another quart, applied blisters to the neck and gave gargle of sage tea and vinegar and enema.



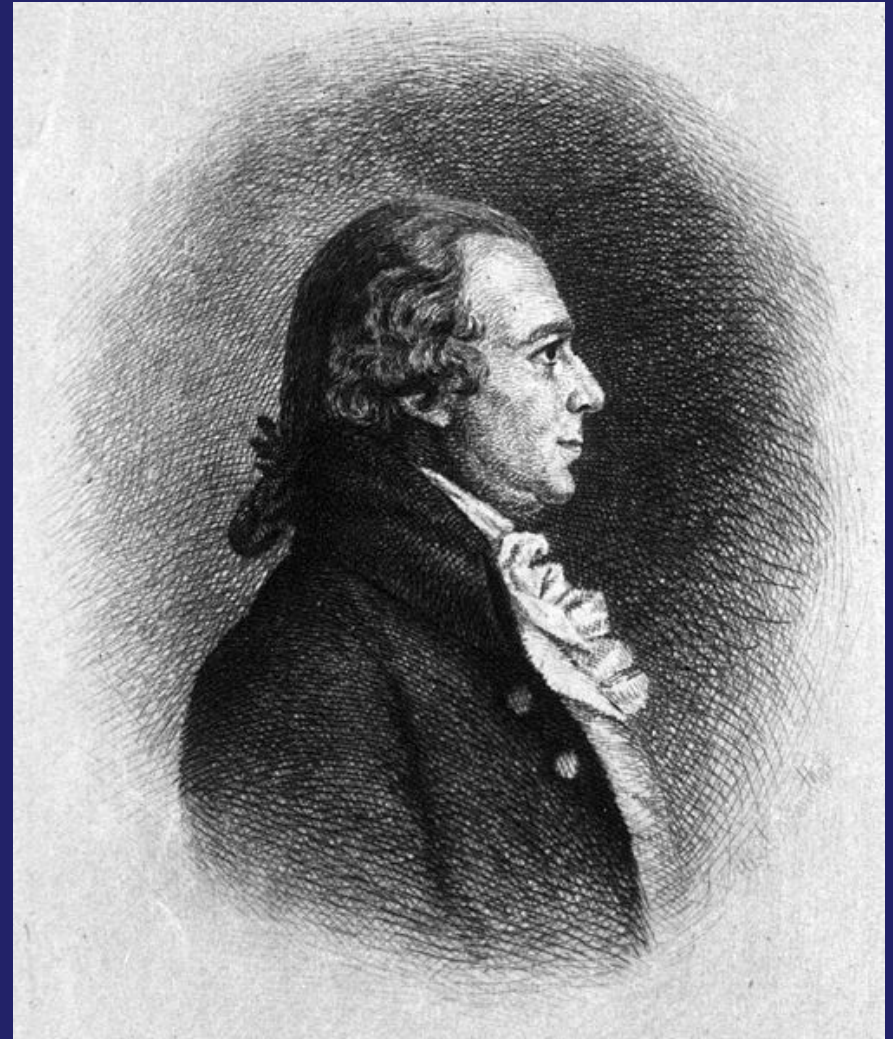
James Craik, MD

2.5 quarts bled, 2.5 quarts remain



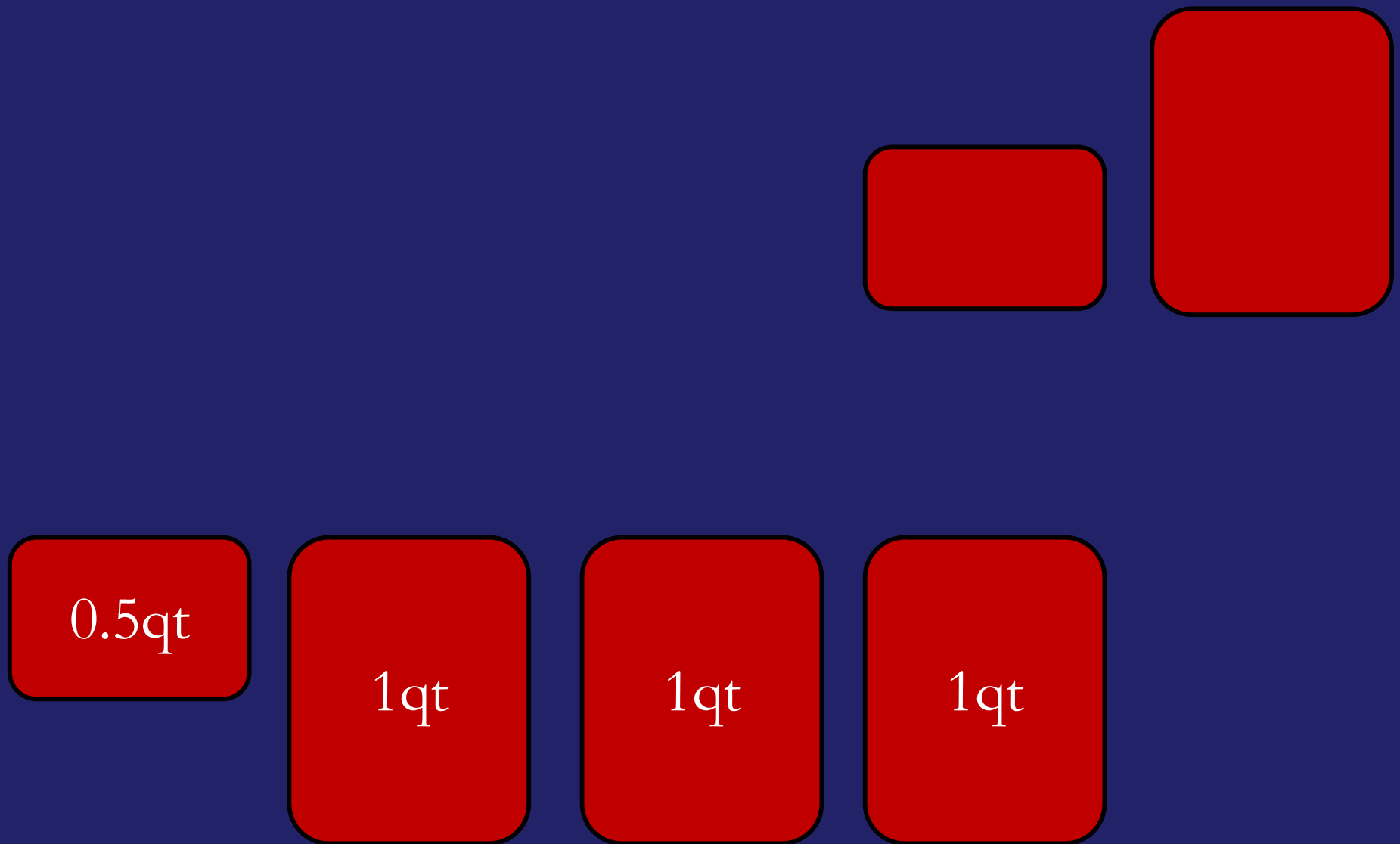
# Saturday, December 14, 1799

- Martha sent for more physicians
- 1500hrs: Drs. Elisha Dick and Gustavius Brown arrive. Another quart of blood drawn over Dick's objection. Dick called for a tracheotomy.



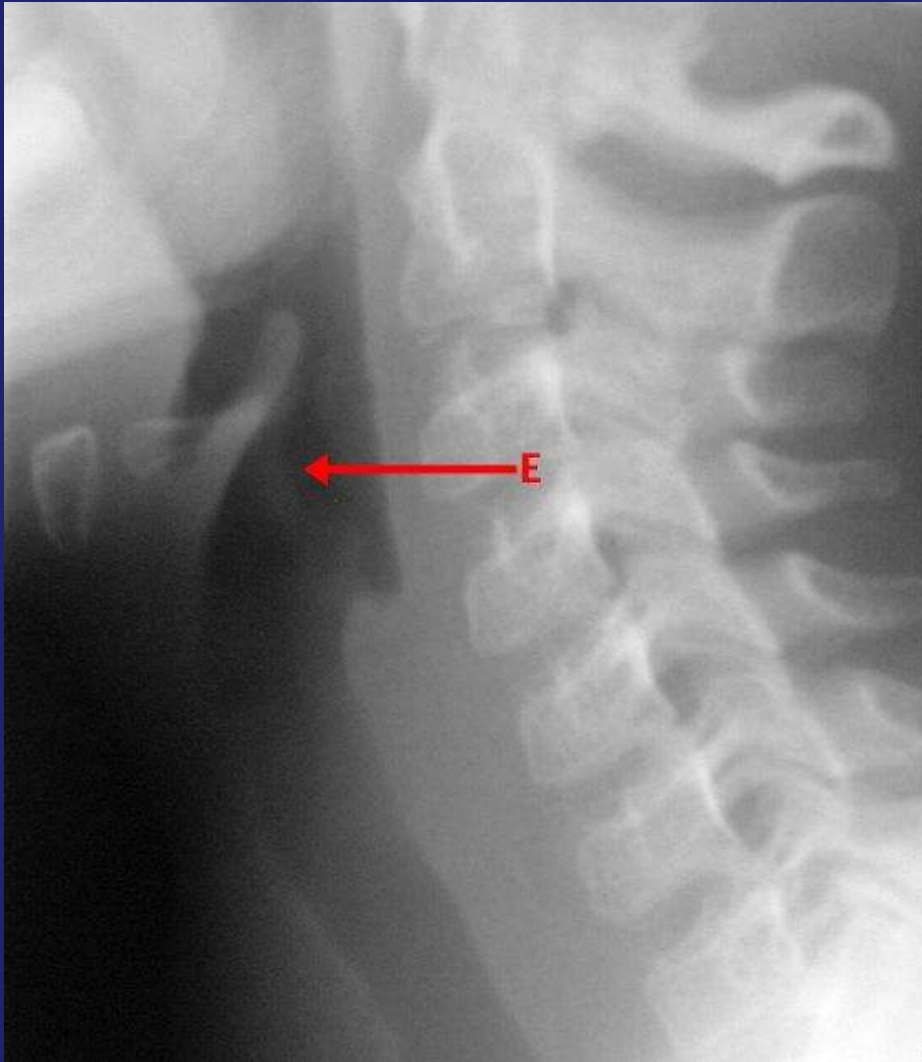
Dr. Elisha C Dick

3.5 quarts bled, 1.5 quarts remain

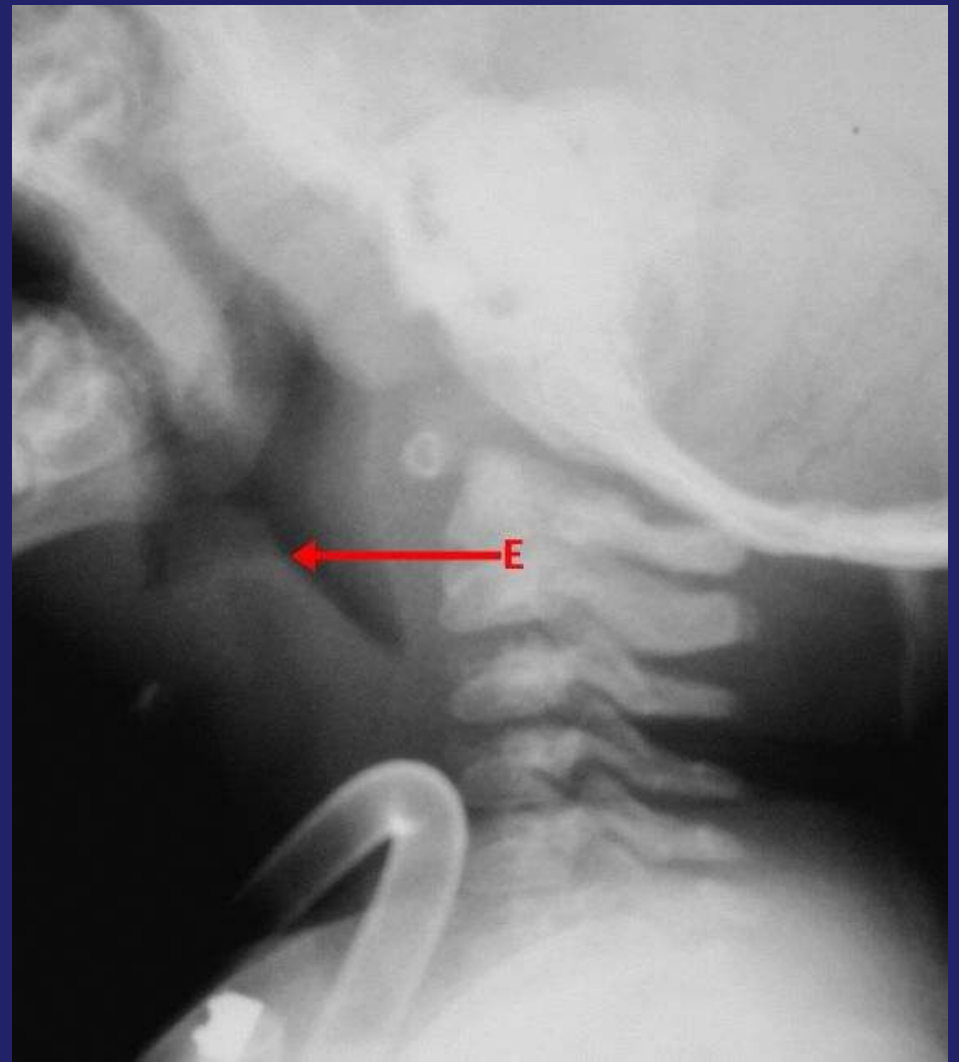




# Acute Epiglottitis



Normal



Acute Epiglottitis

# Saturday, December 14, 1799

- 1630hrs: Washington calls Lear for review of his wills. One will is tossed in the fireplace.
- 1700hrs: Changed into his bedclothes realizing his impending demise. Cataplasms and more blisters were deployed.
- Early evening: Washington asked for all interventions to stop and thanked his physicians.

*“Doctor I die hard, but I am not afraid to go. I believed from my first attack that I should not survive. My breath cannot last long”*

# Saturday, December 14, 1799



10:22pm: Washington dies. Last words:  
*‘Tis well*”

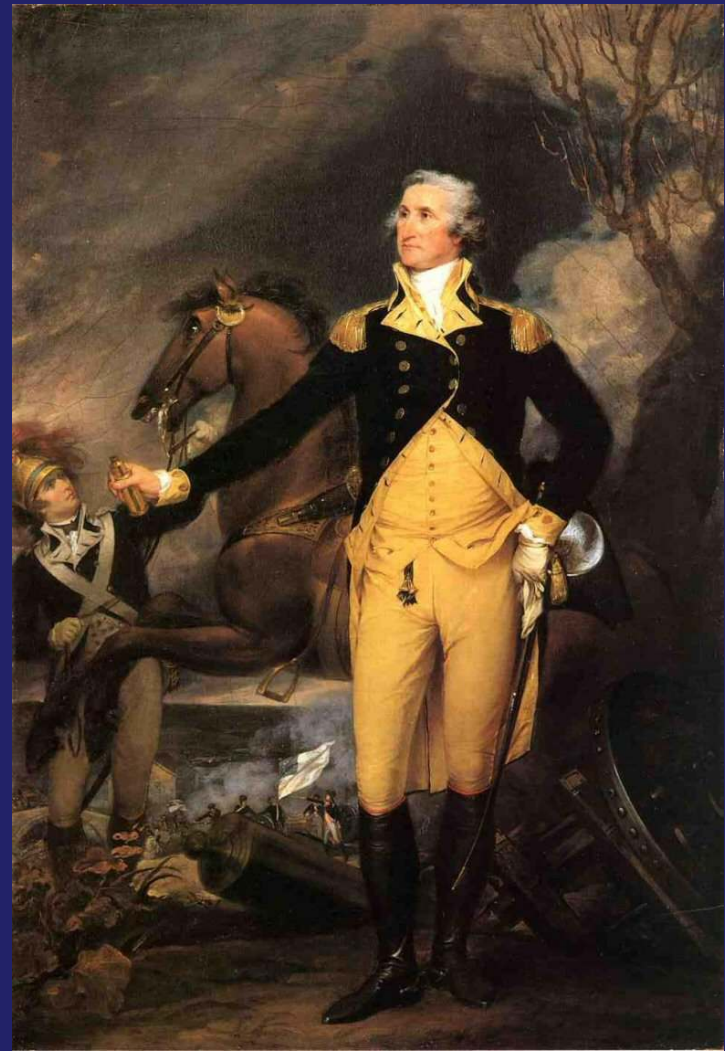
# Monday, December 16, 1799

- Dr. William Thornton sent message to Martha about performing postmortem tracheotomy
- Martha declined
- Recriminations followed



# George Washington (1732-1799)

- Afflicted by many diseases throughout his lifetime
- His medical history tells a greater story of life in Colonial & Revolutionary era
- Demise might have been avoided



# Sources

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