Use of Cross Disciplinary Groups to Improve PSM Student Peer Education

66th Annual Meeting of the Midwestern Association of Graduate Schools

Cincinnati, OH

April 22nd, 2010

Grand Valley State University
www.gvsu.edu

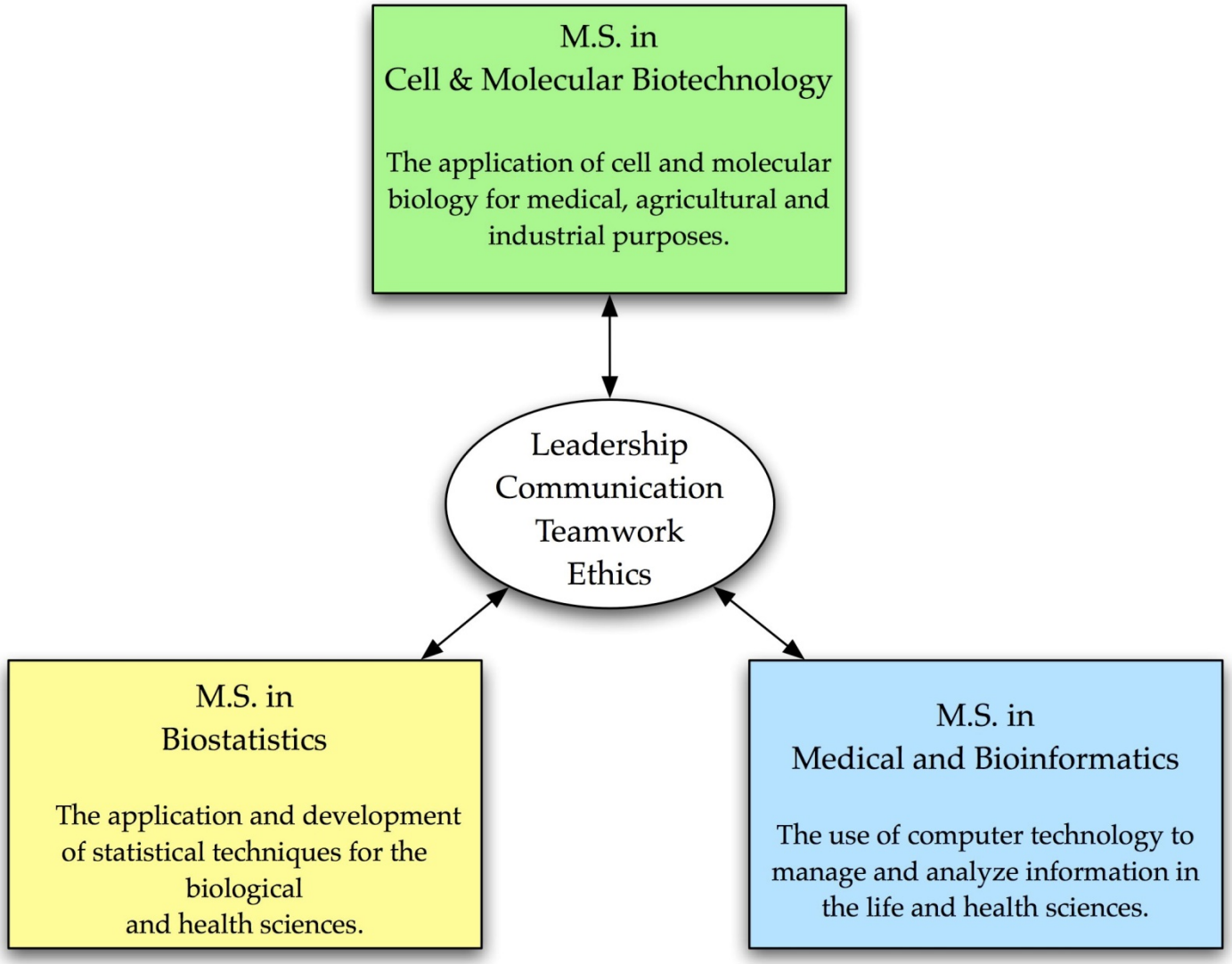
Grand Valley Overview…

- Established in 1960, 50th-yr celebration in 2010-11
  - History as an undergraduate institution serving west Michigan
- Current total enrollment is 24, 408; ~15% graduate
- 123 doctoral and 3,435 masters students for 2009-10
- ~ 25% of degrees awarded annually are graduate degrees
- 28 graduate degree programs
  - Clinical doctorates
    - DPT in Physical Therapy
    - DNP in Nursing
  - EdS program in Educational Leadership
  - 25 Master's degree programs; 46 degree options

PSM Program History at GVSU

- Sloan Foundation Grant – 2003
- First students matriculated in F'04
  - ~ 10 each in Biotechnology, Bioinformatics, and Biostatistics
- Today…
  - 85 active students across programs (28, 25, and 31, respectively)
    - 38% are international students
    - 45% are female
    - 18% are part-time
  - 45 graduates (18 in Biotech; 15 in Biostats; 12 in Bioinformatics)
  - Lost 12 Biotech students over time to MS in CMB
- Fall 2011 enrollment goal
  - 100 FTE students

Our current PSM programs….



Medical & Bioinformatics, M.S. Medical and Bioinformatics utilizes computer technology to manage and analyze information in the life and health sciences. This degree is granted by the School of Computing and Information Systems within the Padnos College of Engineering and Computing.

Cell & Molecular Biology, M.S. (Biotechnology Emphasis) Biotechnology involves the industrial use of living organisms to produce food, drugs, and other products. This degree is granted by the Cell and Molecular Biology Program within the College of Liberal Arts & Sciences.

Biostatistics, M.S. Biostatistics involves the application of statistical techniques to scientific research in the life and health sciences. This degree is granted by the Statistics Department within the College of Liberal Arts & Sciences.

GVSU PSM Internships

Internship Sites	Num Interns	Num BINF	Num BSTA	Num CMB
Number of Internship Sites Thru W09	17	5	8	10
Van Andel Research Institute	11	2	3	6
Arivium	5	4		1
Mich Blueberry Growers	3			3
MPI Research	3		3	
Next Generation Therapeutics	3			3
Spectrum Health	3	2	1	
Annis Water Resources Institute	2		1	1
Cleveland Clinic	2	1		1
Kent County Health Department	2		2	
St Marys Healthcare	2	2		
Center for Molecular Medicine	1			1
GVSU- CMB	1			1
Mich High Throughput Screening Center	1			1
Michigan State University	1			1
Pfizer Animal Health	1		1	
Priority Health	1		1	
QST Consultations	1		1	
Internship Totals Thru W09	43	11	13	19

GVSU 2008 PSM Biostatistics Grads Stay in Michigan

From left: Craig Johnson, Heather Houseman, Becky Twing, Justin Sjogren and Tom Holmes

Van Andel Institute

GVSU PSM CMB Biotech Grads

Laboratory of Mass Spectrometry and Proteomics

From left: Cavey, Lehner, Davidson

From Left: Greg Cavey, P.I.,
Caryn Lehner, GVSU PSM Cell & Molecular Biotechnology M.S. 2007,
Paula Davidson

Van Andel Institute®

Patrick Richardson (1st)

Biostatistician at the Van Andel Research Institute

Greater Grand Rapids, Michigan Area | Biotechnology

Patrick Richardson is working on SAS Certification. 24 days ago

Current	• **Biostatistician** at **The Van Andel Institute** • **Principal** at **Richardson Consulting Services, L.L.C.**
Past	• Finance Manager at Rapid Air • Commercial Pilot / Flight Instructor at Rapid Air
Education	• Grand Valley State University • Davenport University • Aquinas College
Recommendations	**3** people have recommended Patrick
Connections	**32** connections
Websites	• Van Andel Research Institute • Prgm of Translational Medicine • Коммерсант
Public Profile	http://www.linkedin.com/in/patrickjrichardson

PSM Biostatistics M.S., 2008

GVSU PSM Medical & Bioinformatics Grad

Susan Conarroe (1st)

Biomedical Informatics Professional

Greater Seattle Area | Information Technology and Services

Current

- **Informatics Supervisor, UW Autism Center at University of Washington**

Past

- Clinical Research Technician at Spectrum Health
- Visiting Researcher at Van Andel Institute
- Senior Developer at Case's Ladder

see all...

Education

- Grand Valley State University
- Centre College

PSM Medical & Bioinformatics M.S. 2007

GVSU PSM Cell & Molecular Biotechnology Grad

Bertrand Eban (1st)

Associate Scientist at Emergent BioSolutions

Greater Grand Rapids, Michigan Area | Biotechnology

Current	• **Associate Scientist** at **Emergent BioSolutions**
Past	• Research Assistant (Intern) at Michigan high throughput screening center • Laboratory Technician at South Texas Nuclear pharmacy
Education	• Grand Valley State University • Texas Southern University • Ngoa et nkele

PSM Cell & Molecular Biotechnology M.S., 2008

Blueberry breeder felt need to go back to school

Photos

Dennis R.J. Geppert/The Holland Sentinel

At age 53 Ed wheeler will graduate from Grand Valley State University with his masters in Science on Saturday.

Wheeler is not a typical student.

Wheeler felt he needed to go back to school based on his work with developing varieties of blueberries.

By ROEL GARCIA
The Holland Sentinel
Posted Apr 26, 2008 @ 06:00 AM

Laketown Township, MI — Ed Wheeler balanced many aspects of his life for three years: family, work and graduate school.

Today, April 26, Wheeler graduates from Grand Valley State University with a master's degree in cell molecular biology.

The Laketown Township resident is 53, been married to wife JayLynn for eight years and has two grown children and works full-time as a blueberry breeder for Michigan Blueberry Growers Association in Grand Junction. He finished his undergraduate degree from Western Michigan University in 1977.

- In addition to technical skills, ethics and critical thinking, PSM degrees emphasize “soft skills” including :
  - Interpersonal skills
  - Leadership skills
  - Communication skills
  - Problem solving skills
  - Teamwork

PSM Interdisciplinary Survey Items

- Did you find/feel working in an interdisciplinary group…
  - Made the task easier or more difficult?
  - Allowed your group to be more successful working on the project?
  - Helped you learn more about the subject?
  - Promoted "peer teaching?"
- Do you think that jobs in industry require work in interdisciplinary groups?
- Do you feel that it would be beneficial to your education to work in interdisciplinary groups?
- Please write any comments you have about working in interdisciplinary groups

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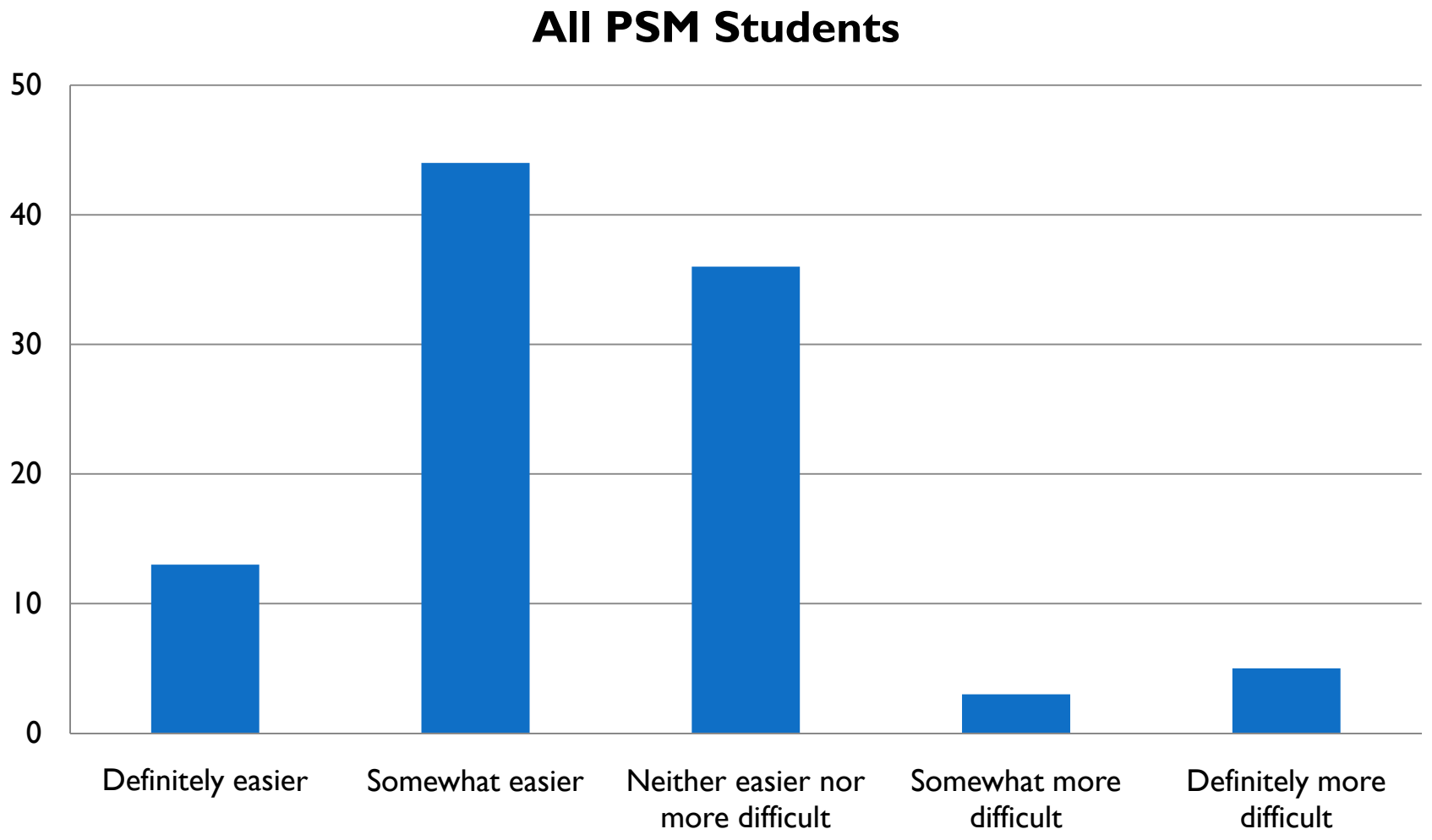

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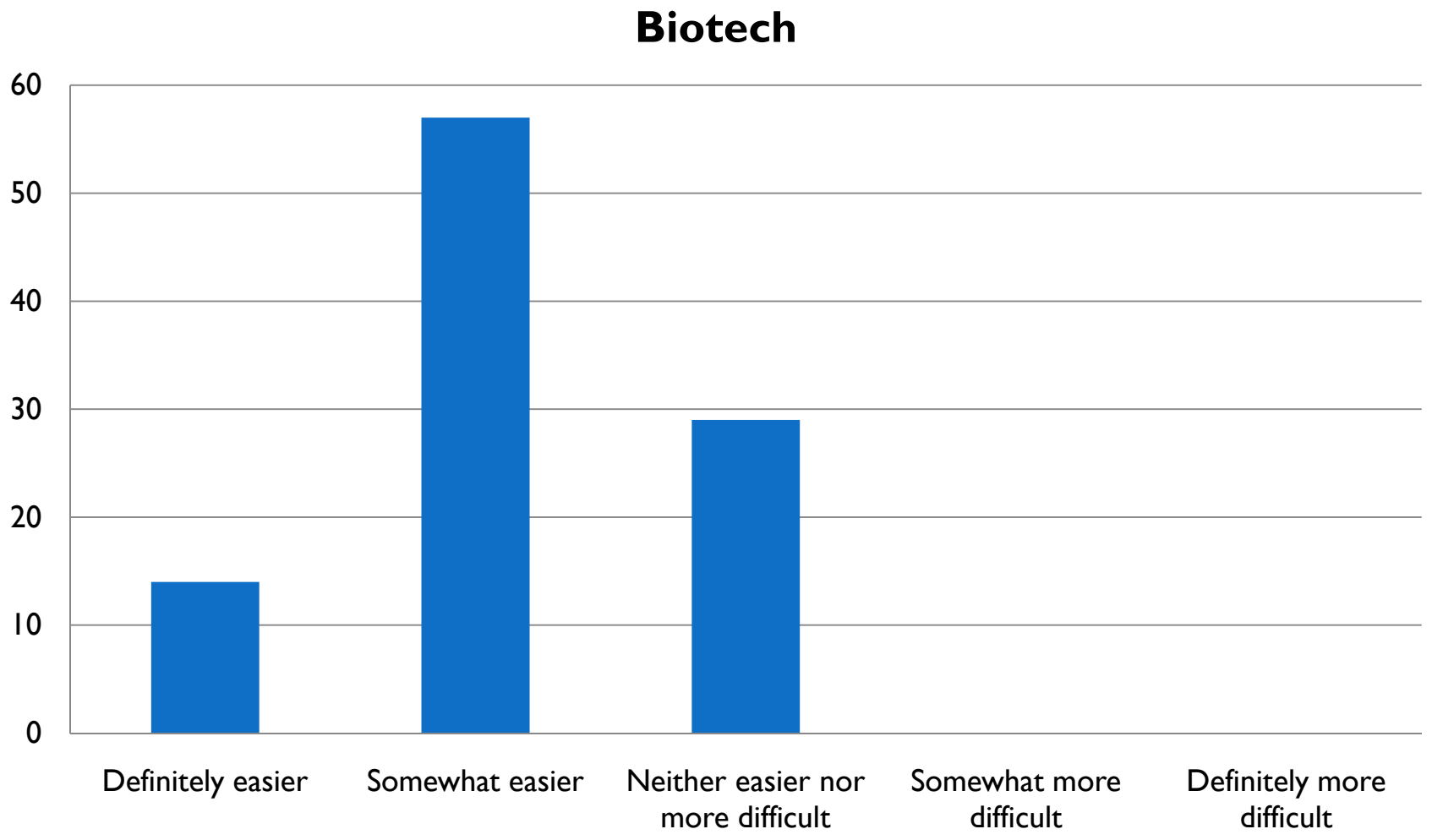

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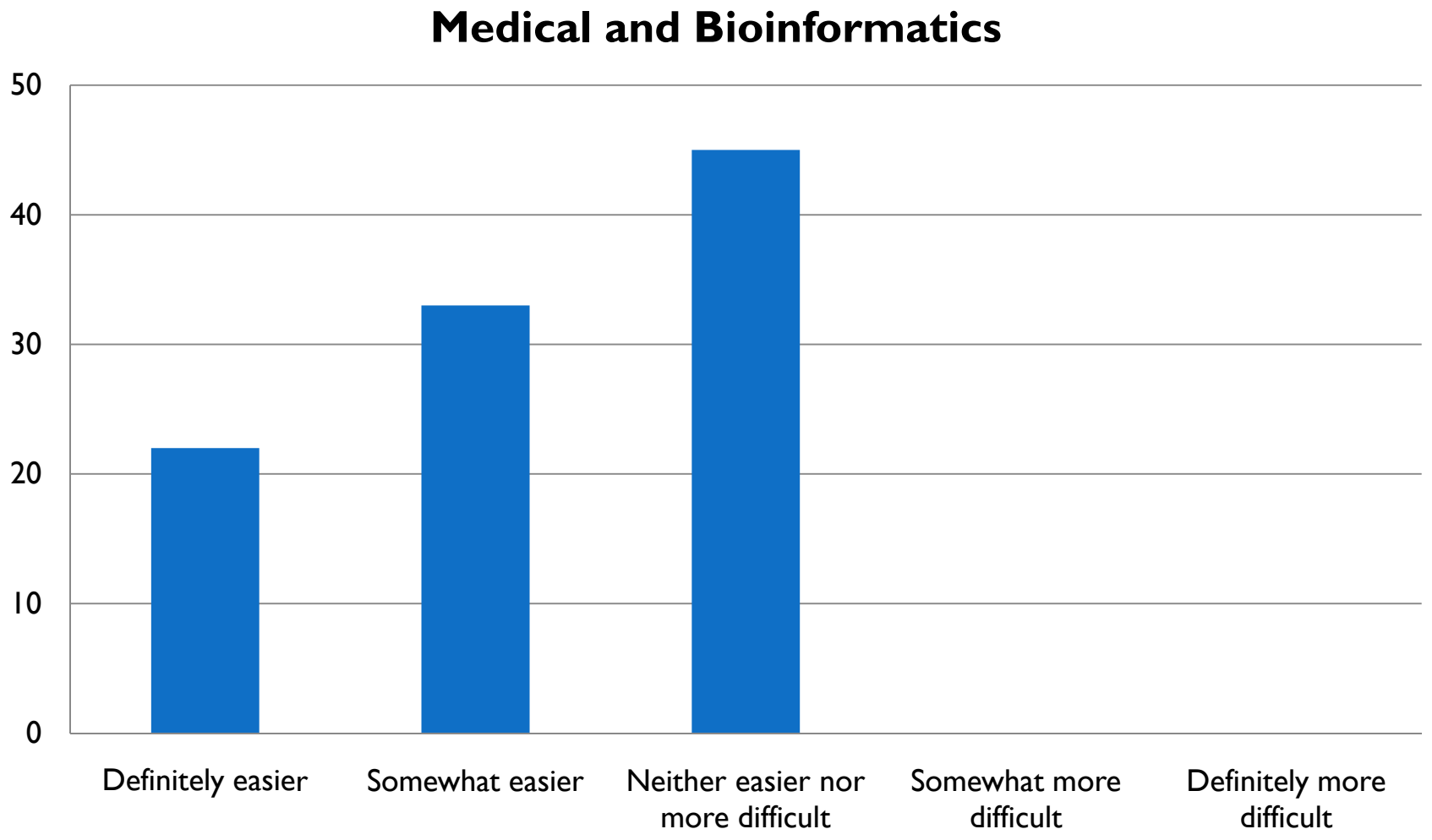

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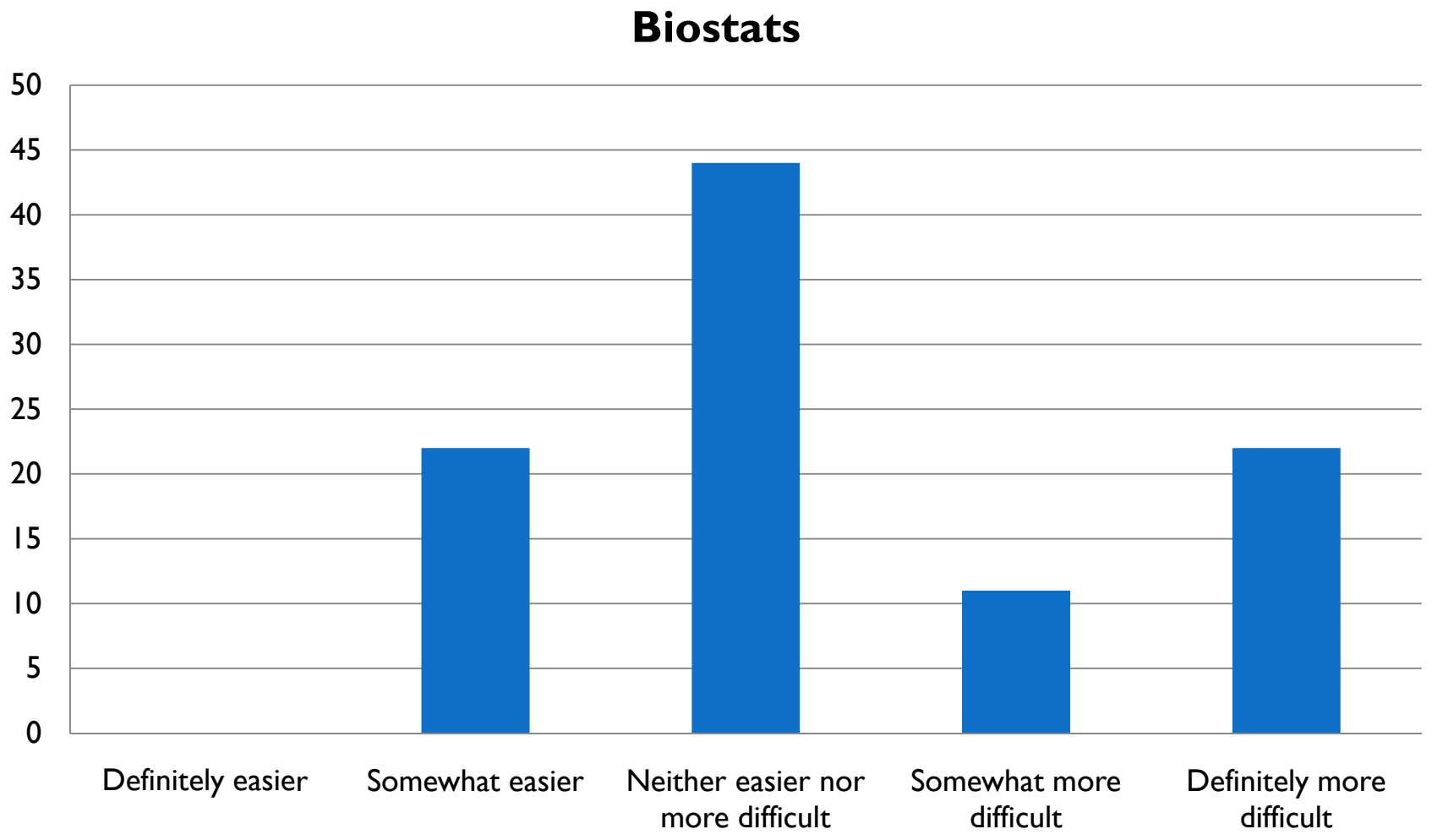

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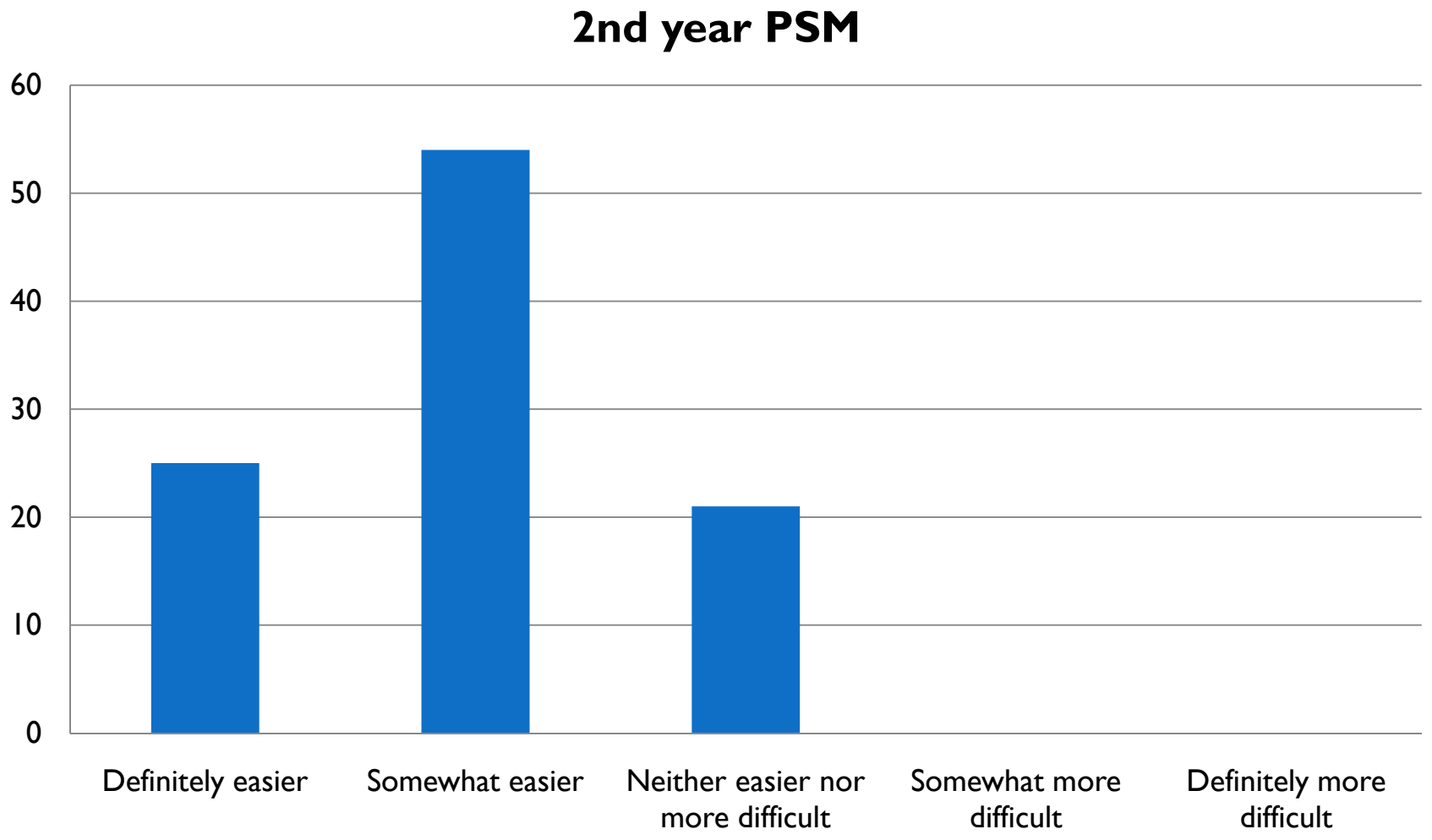

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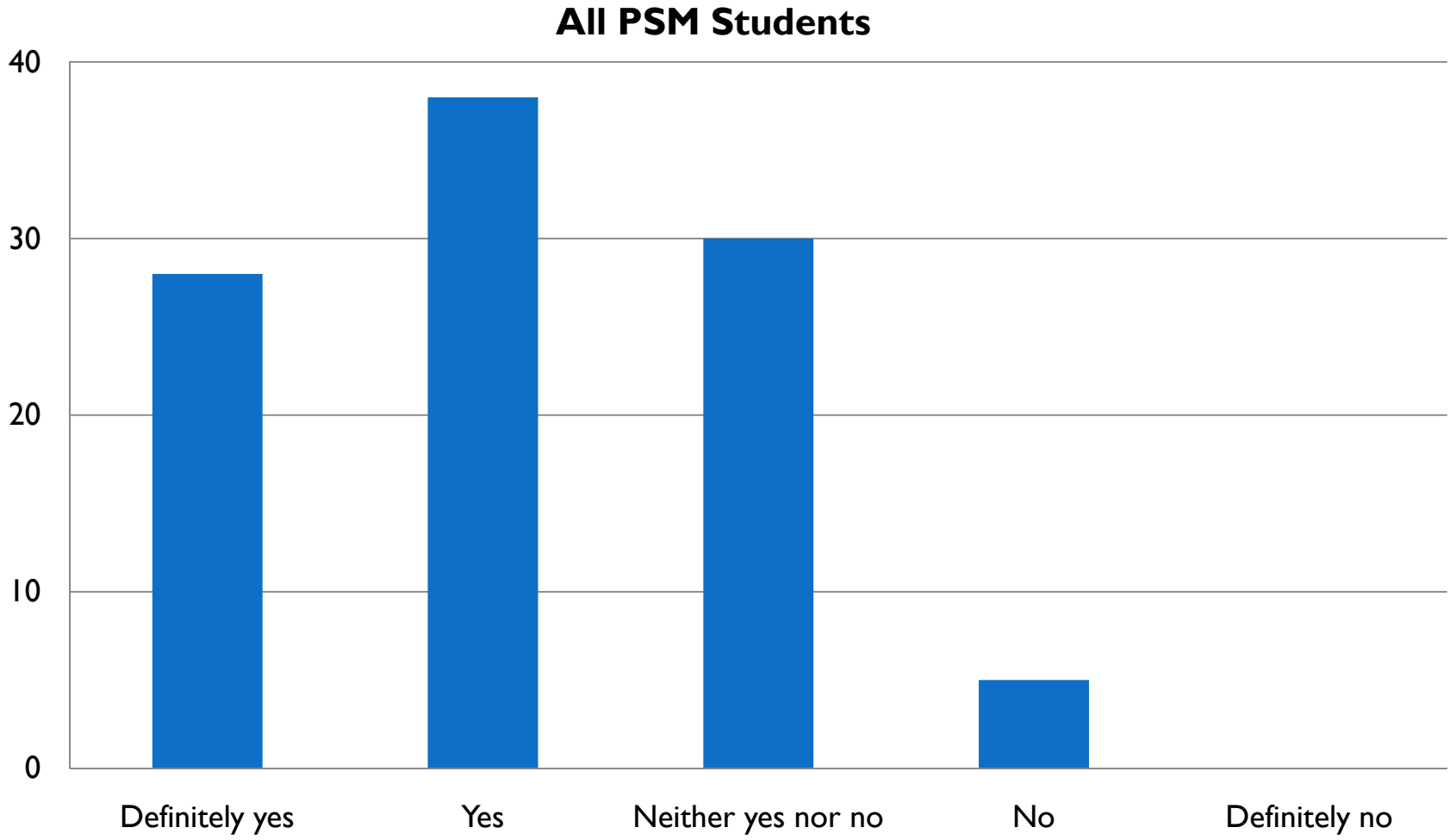

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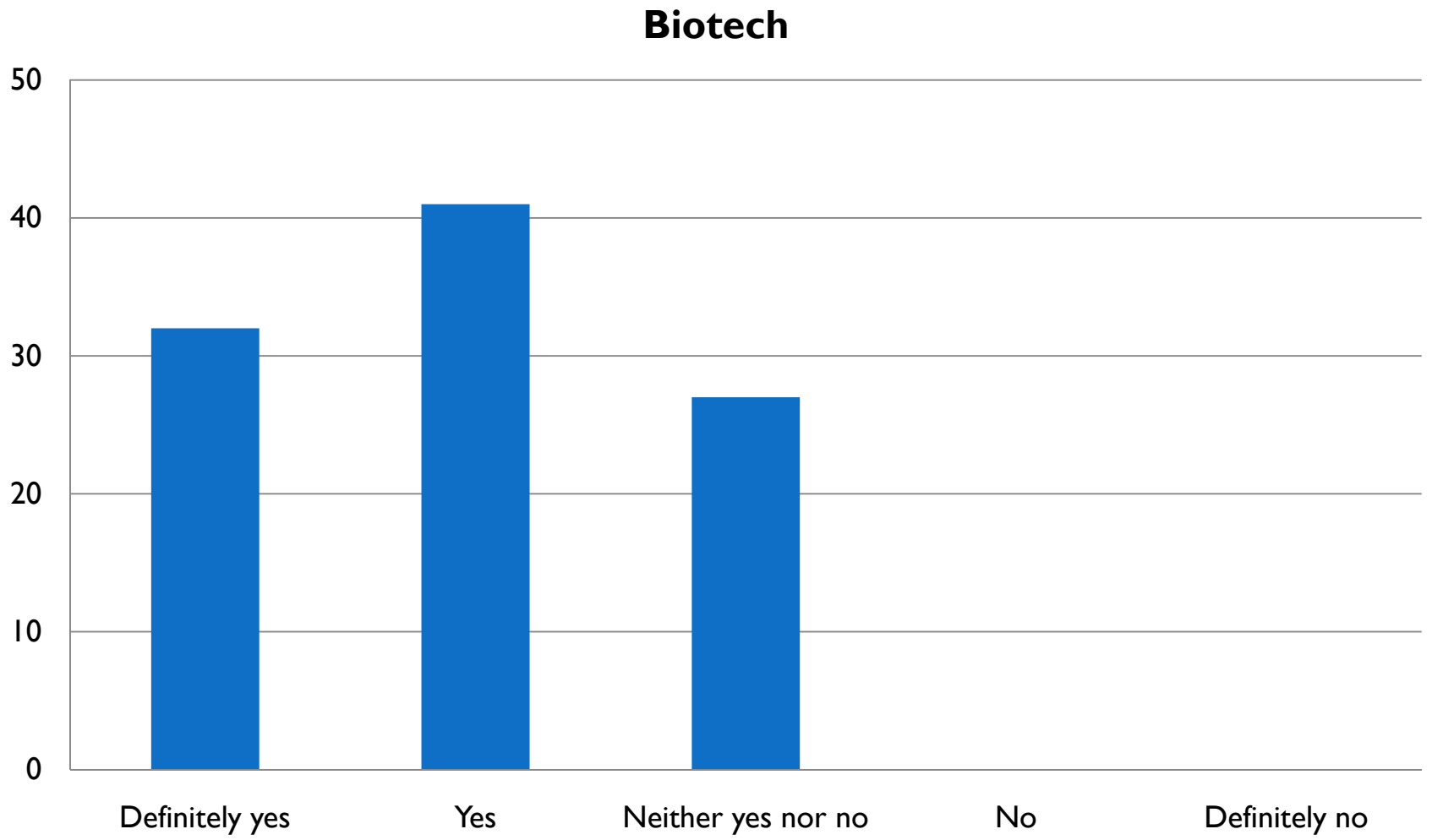

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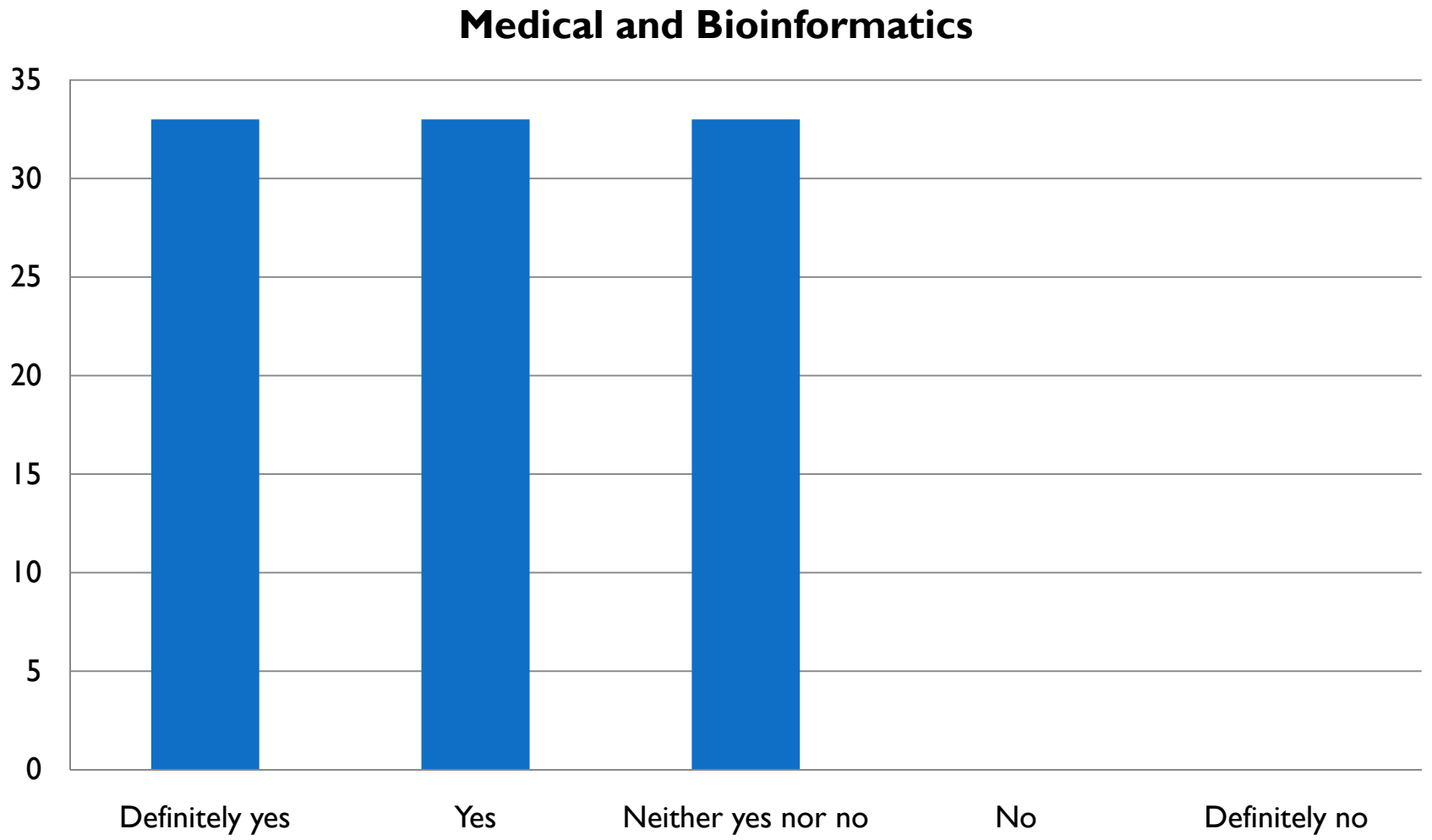

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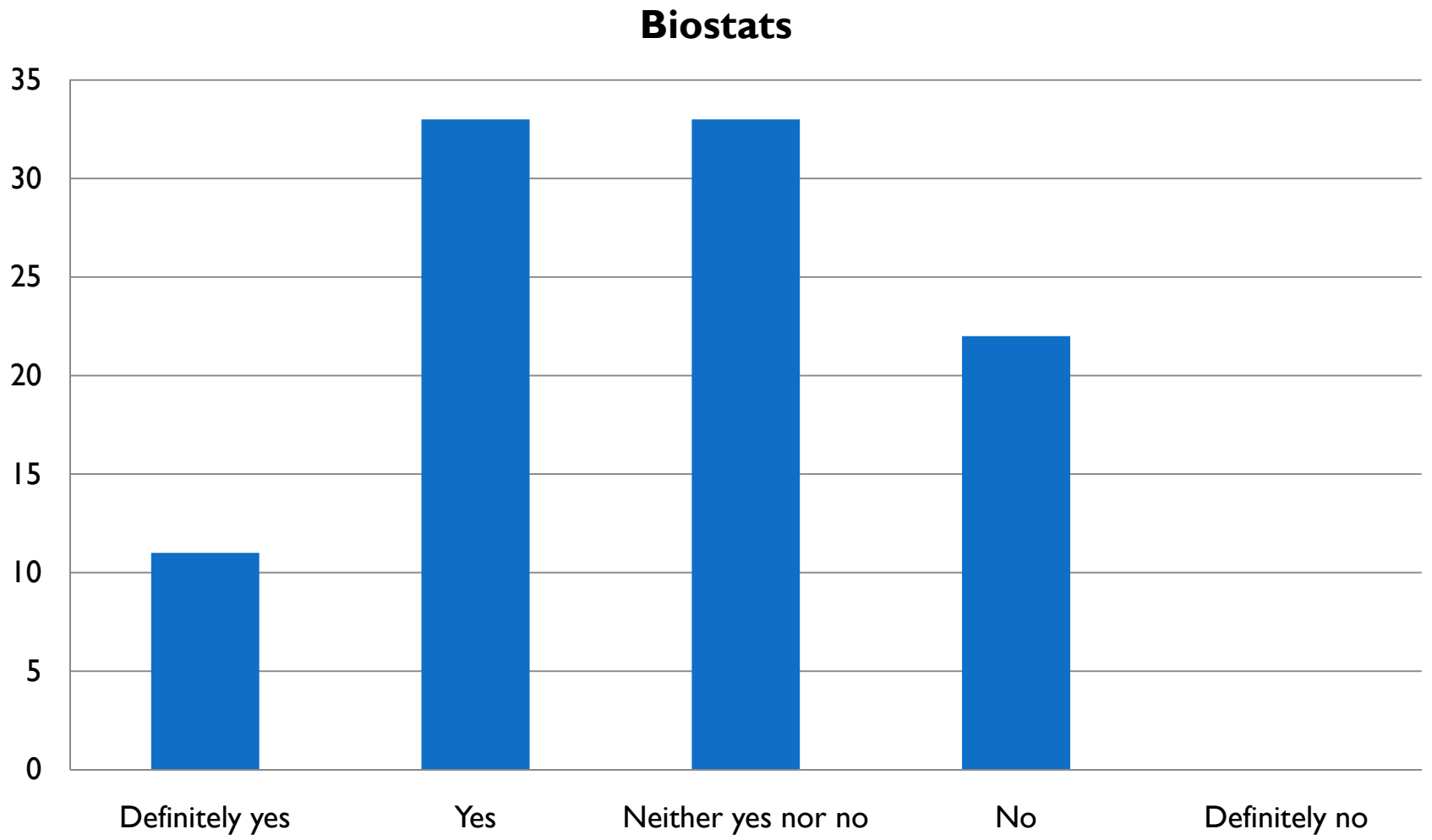

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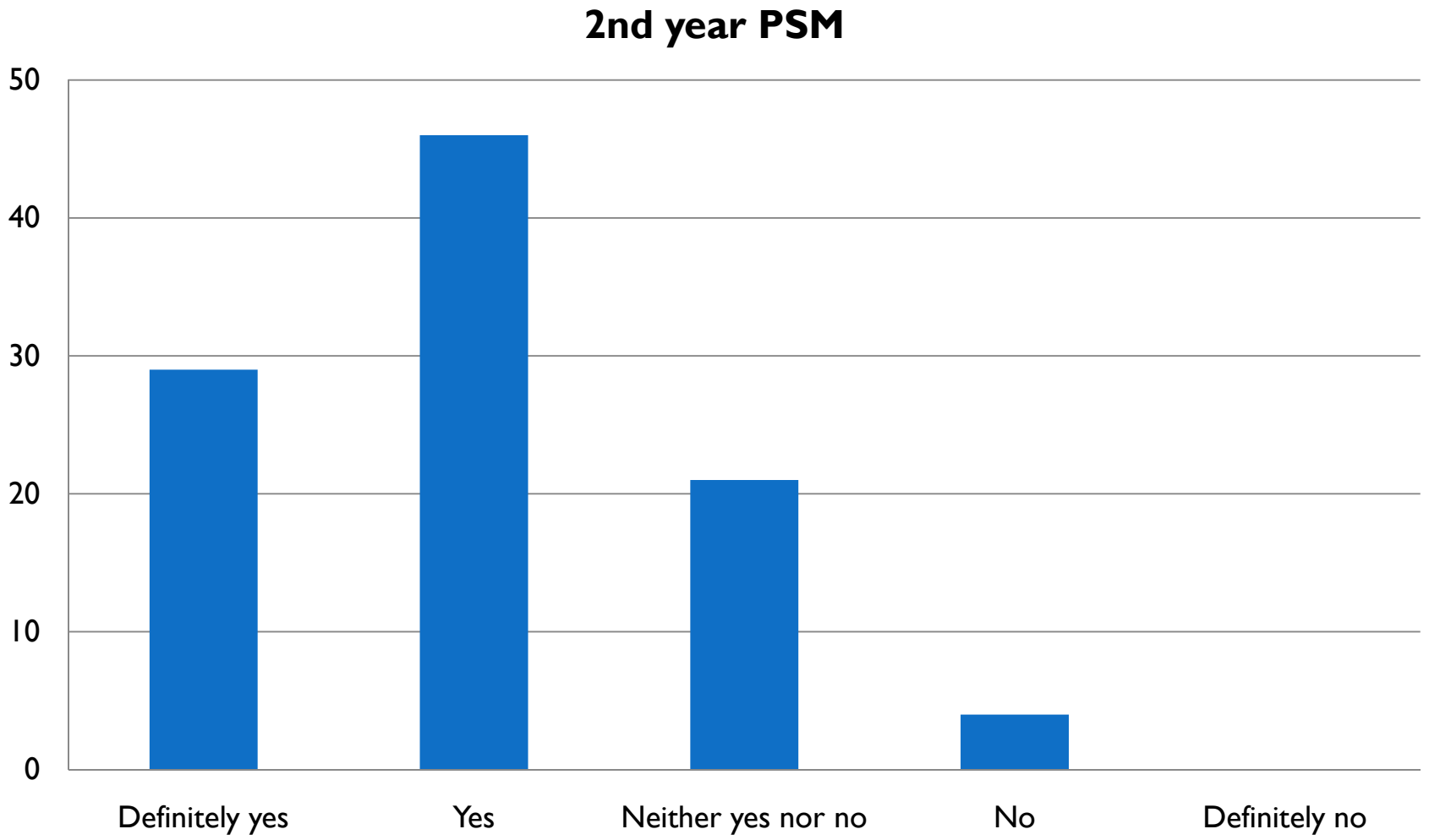

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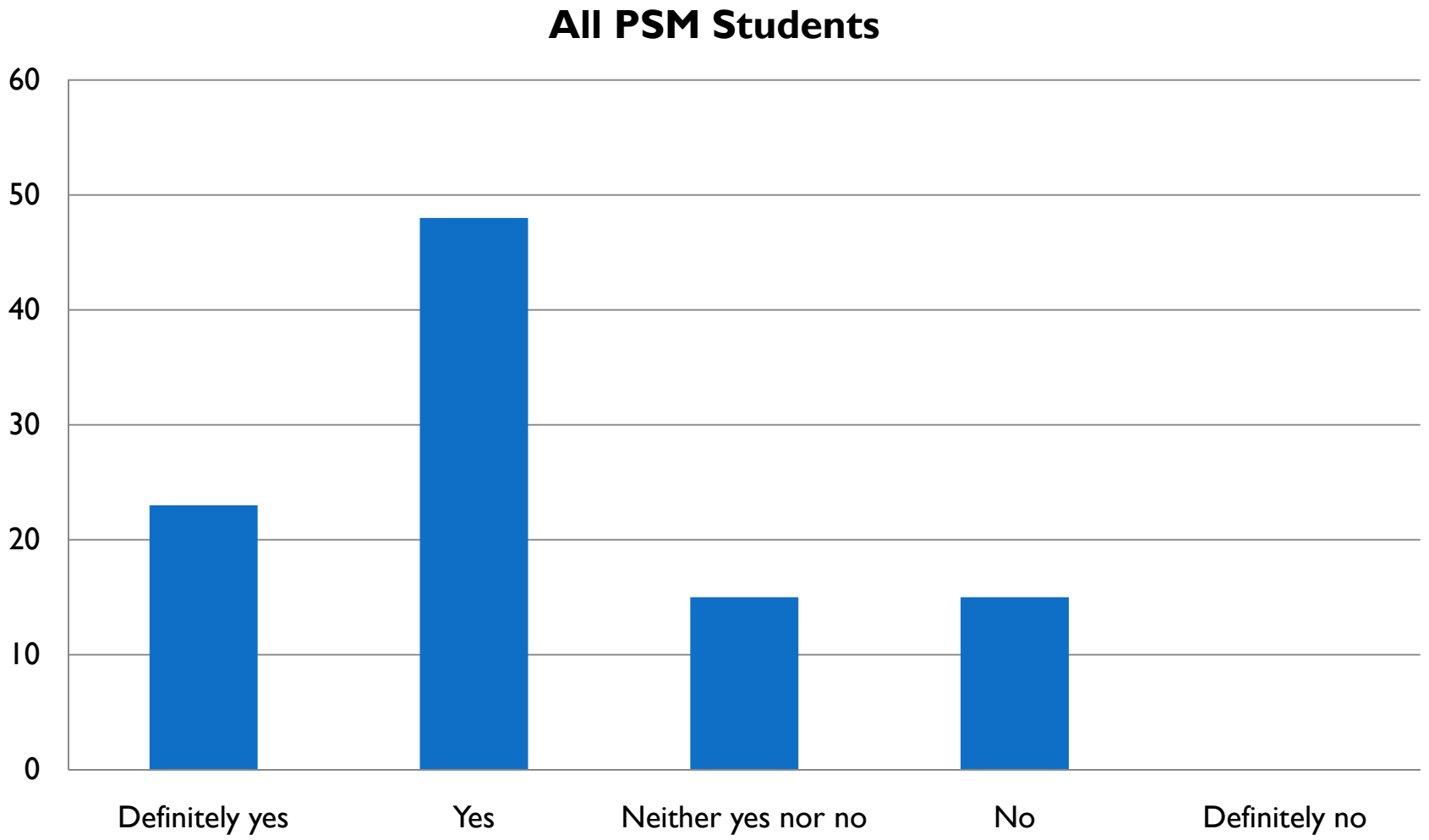

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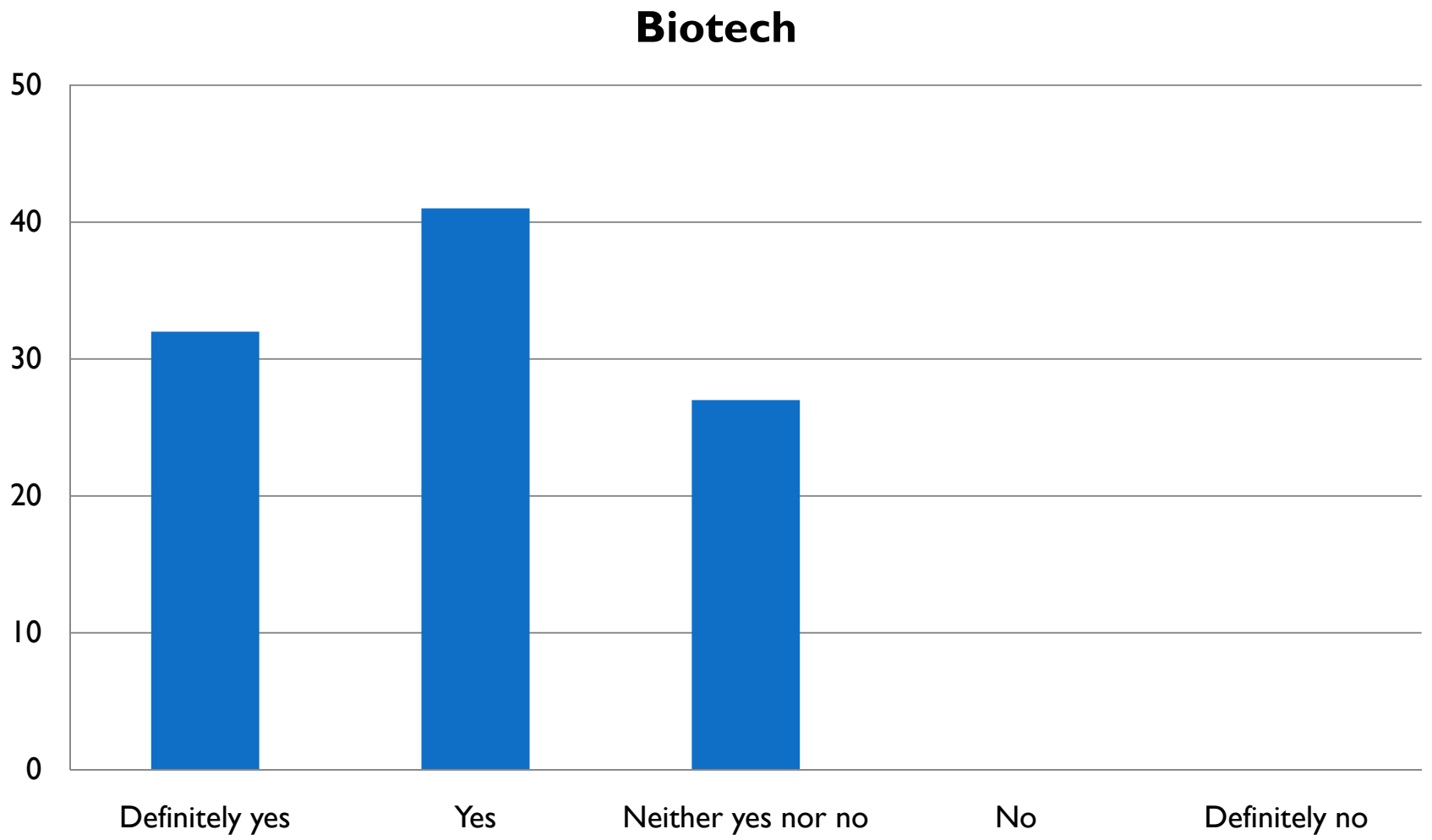

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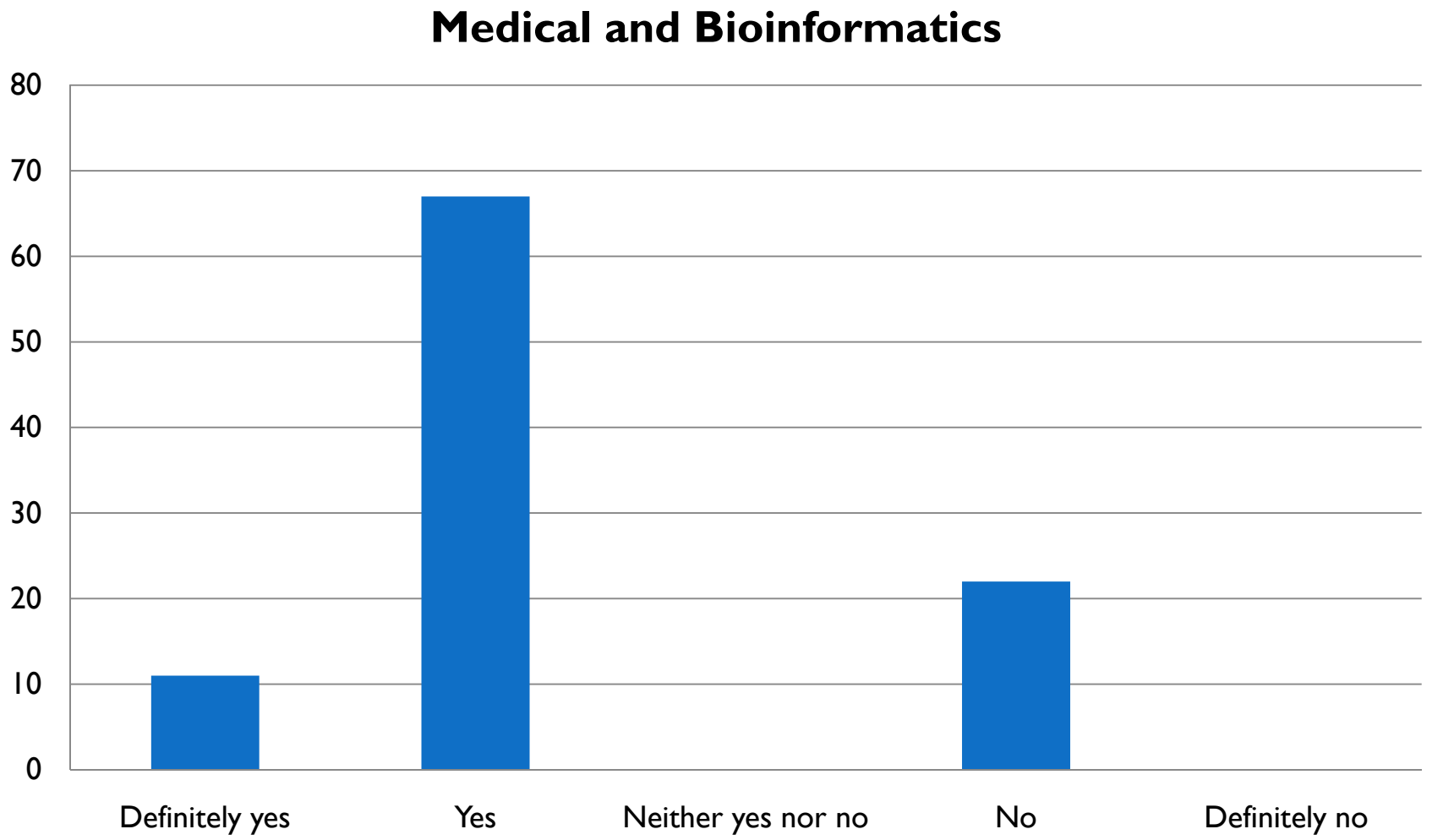

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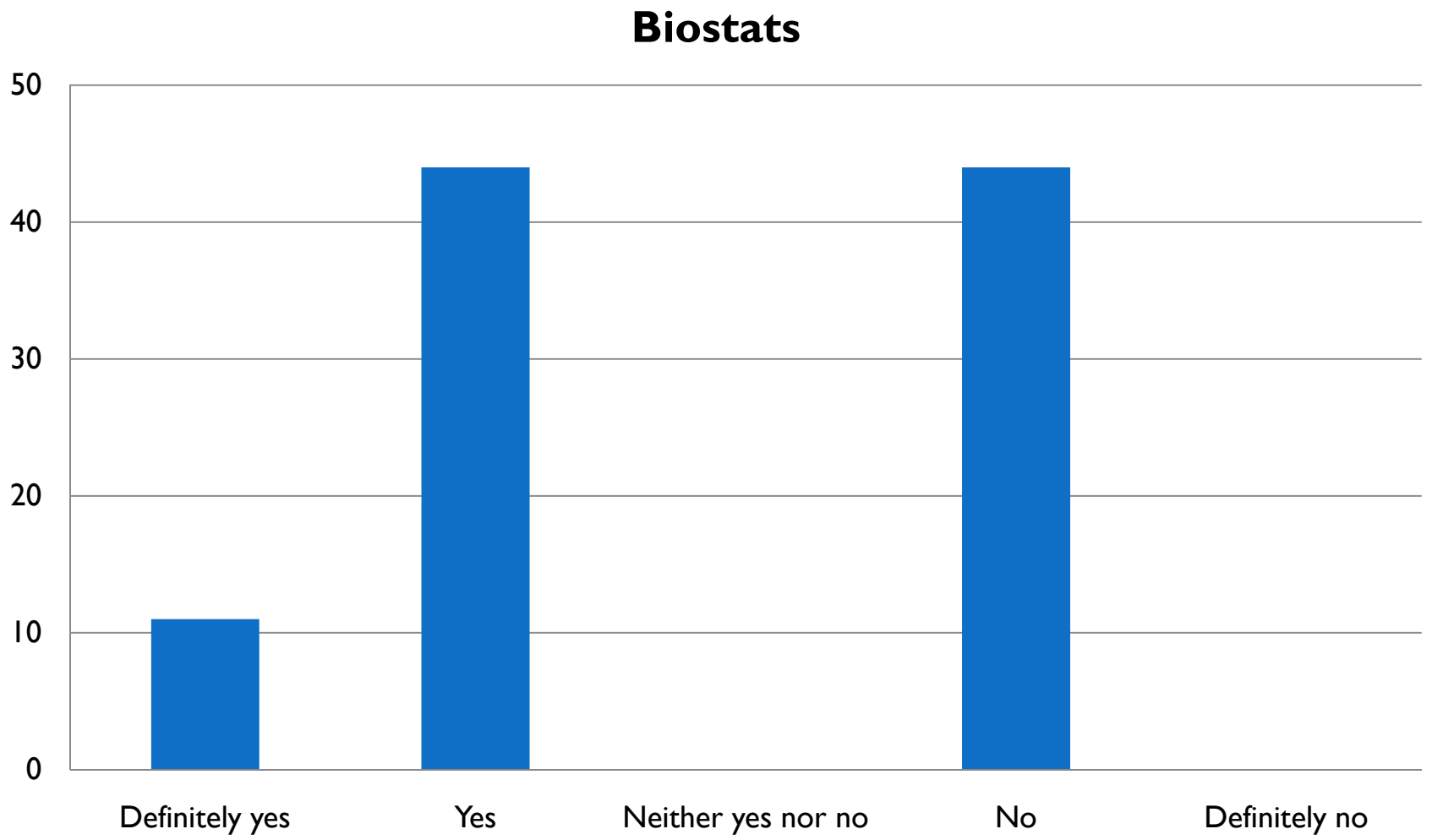

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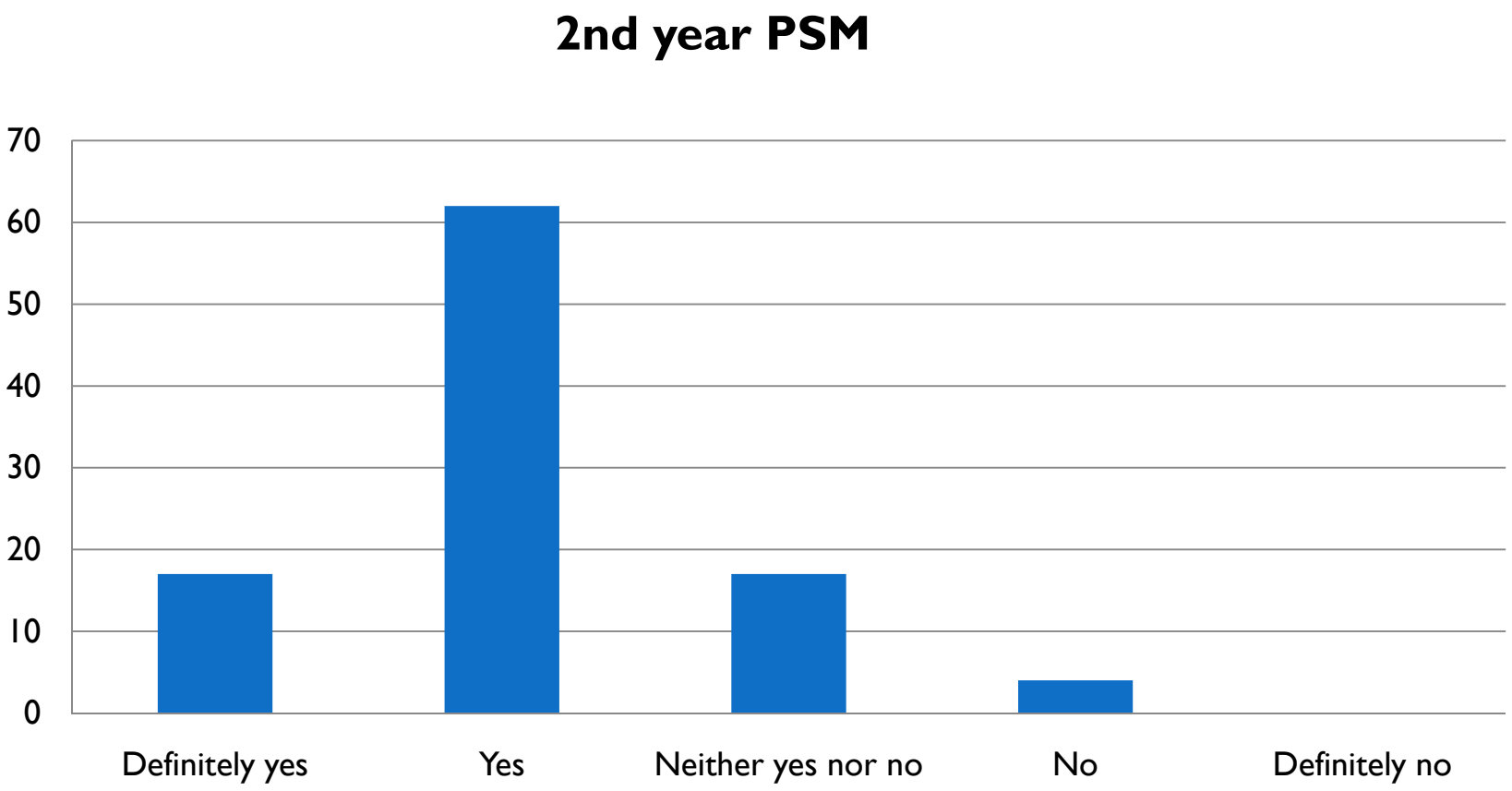

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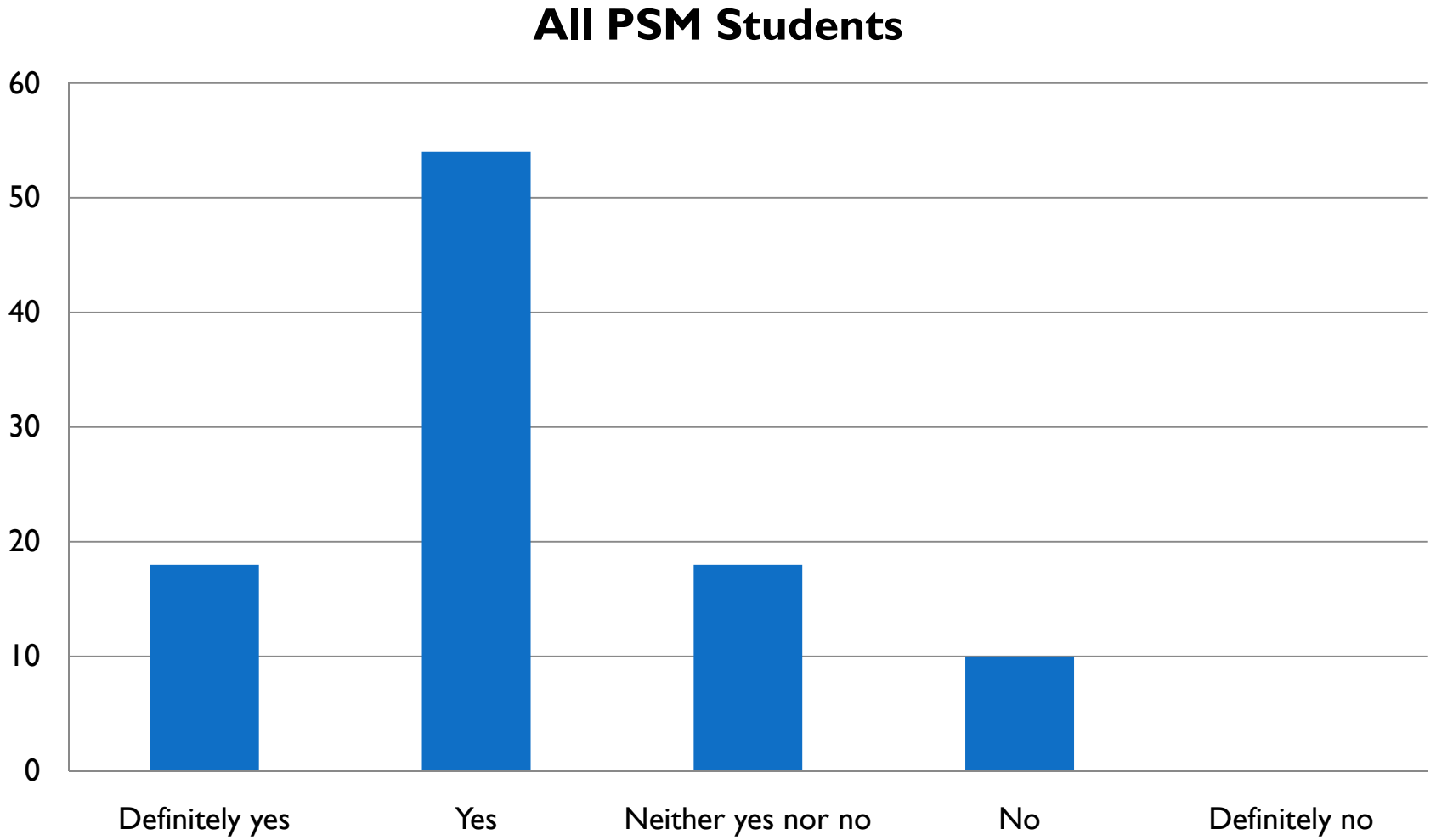

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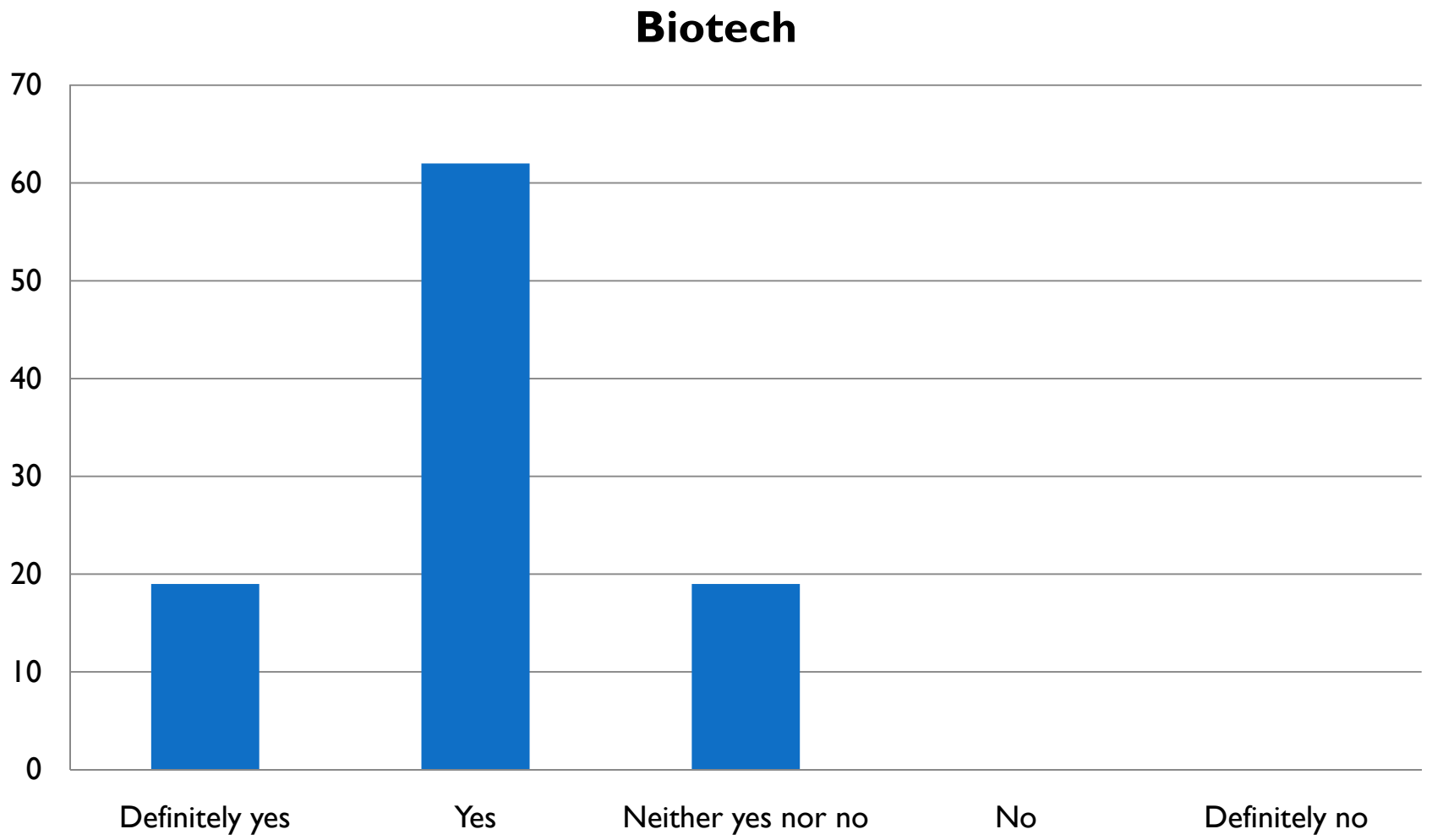

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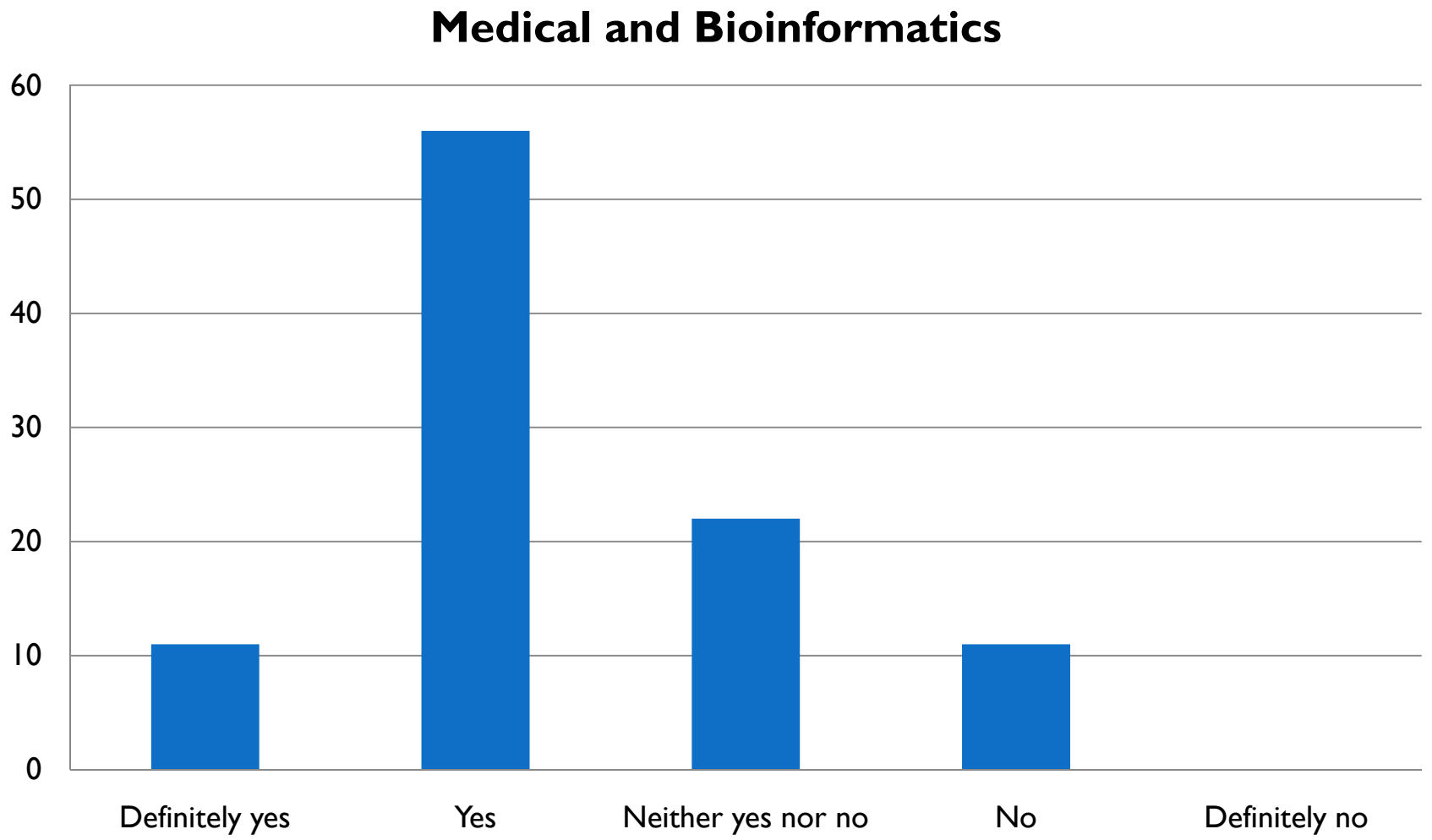

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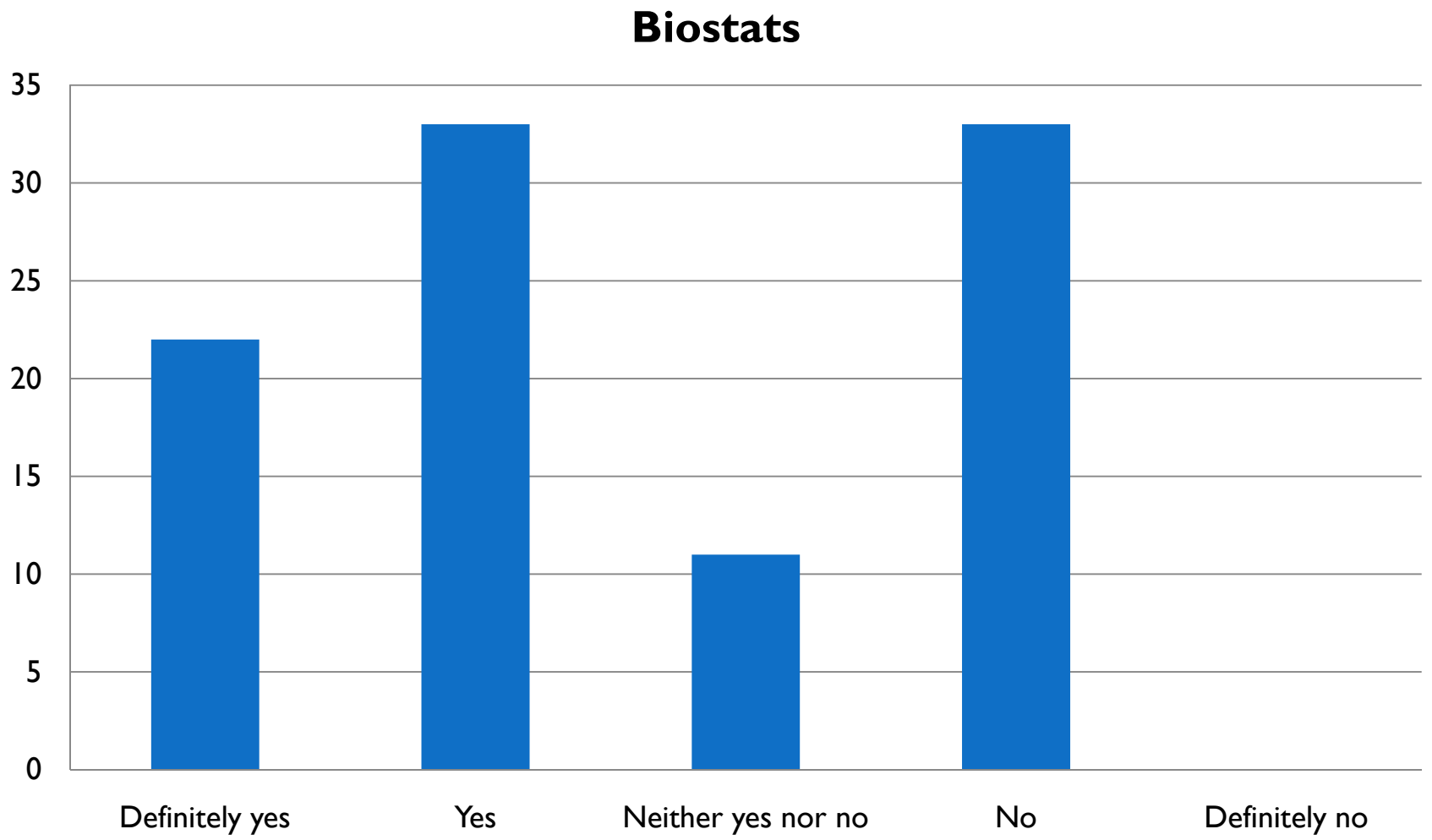

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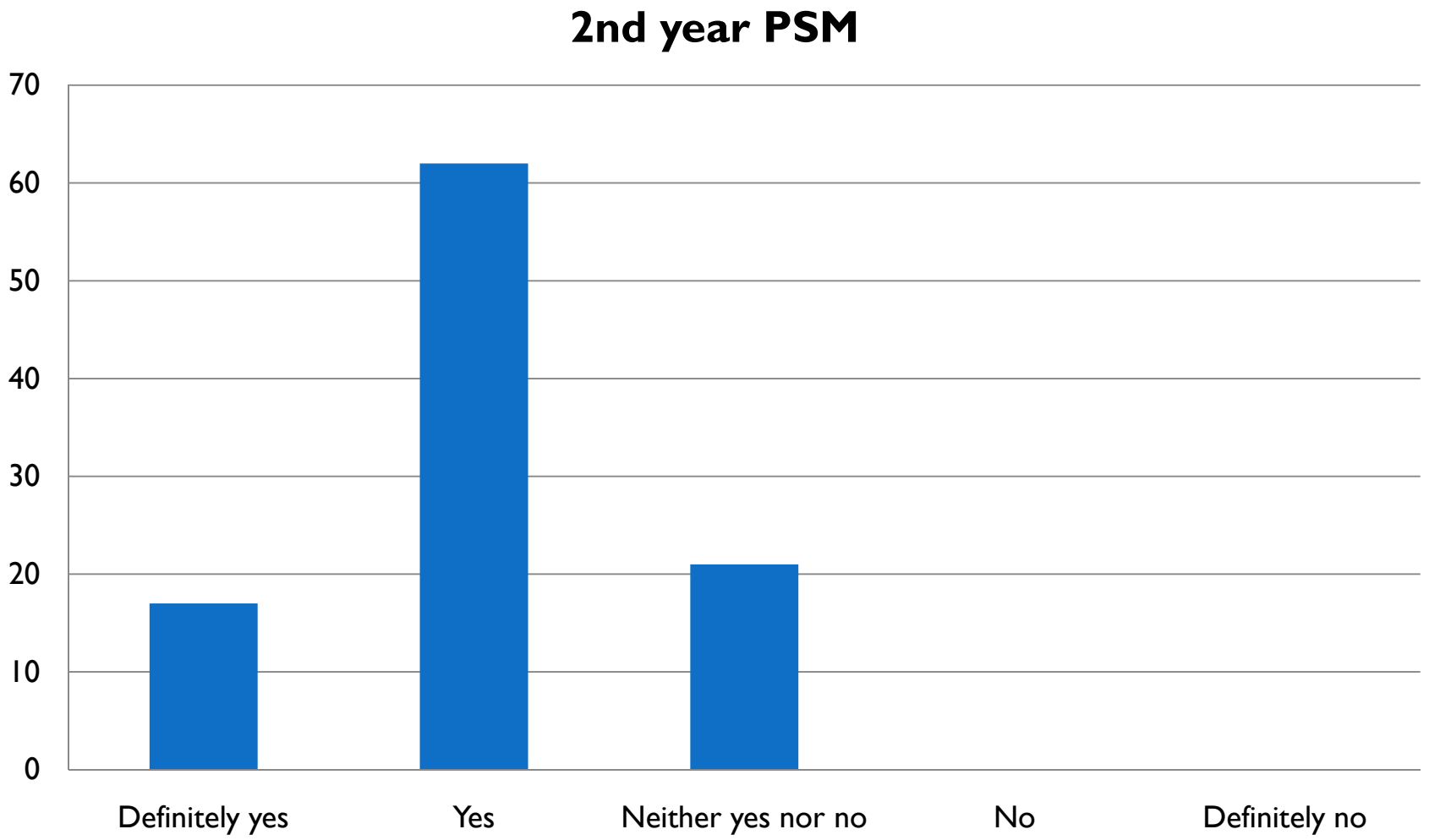

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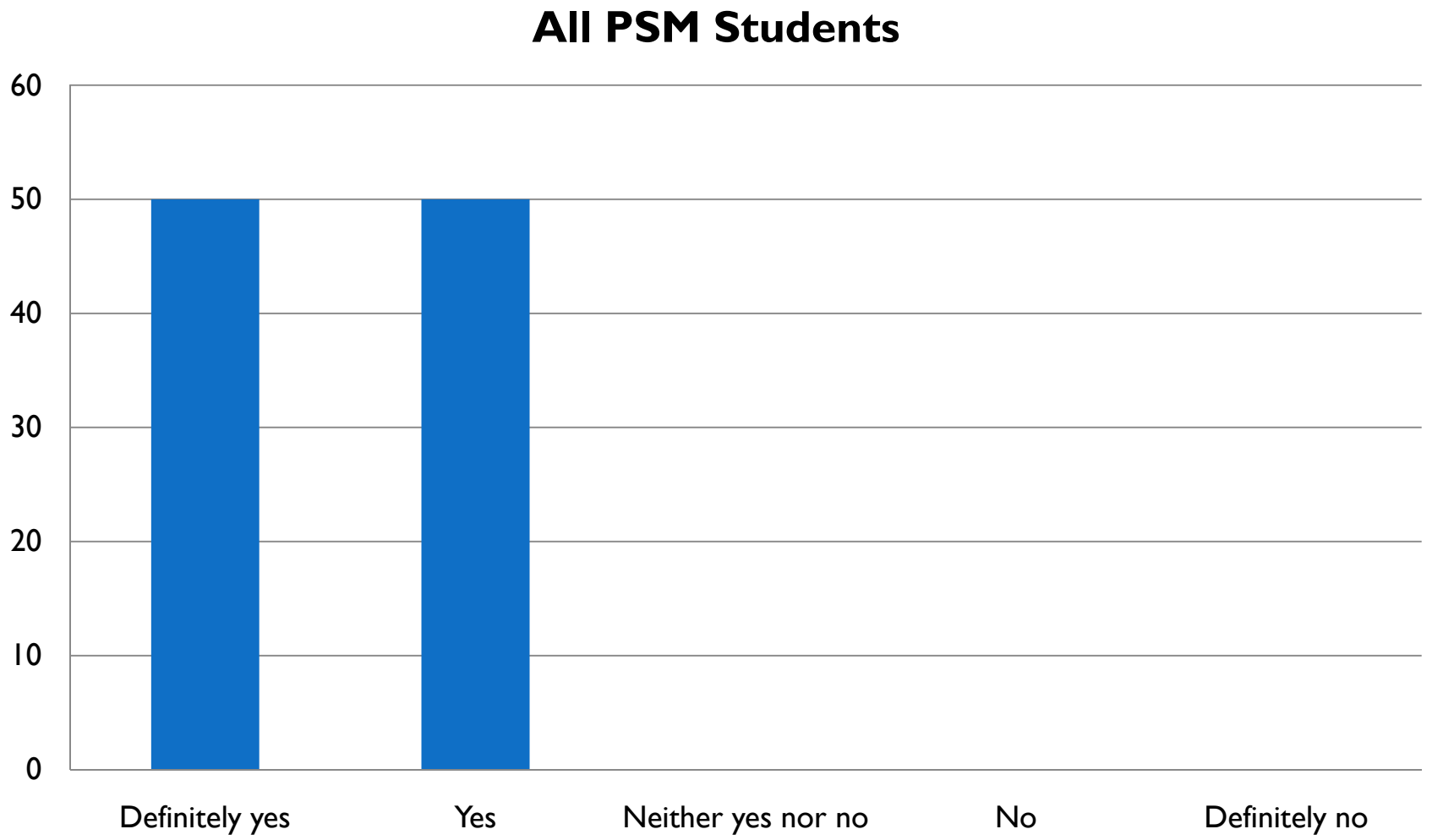

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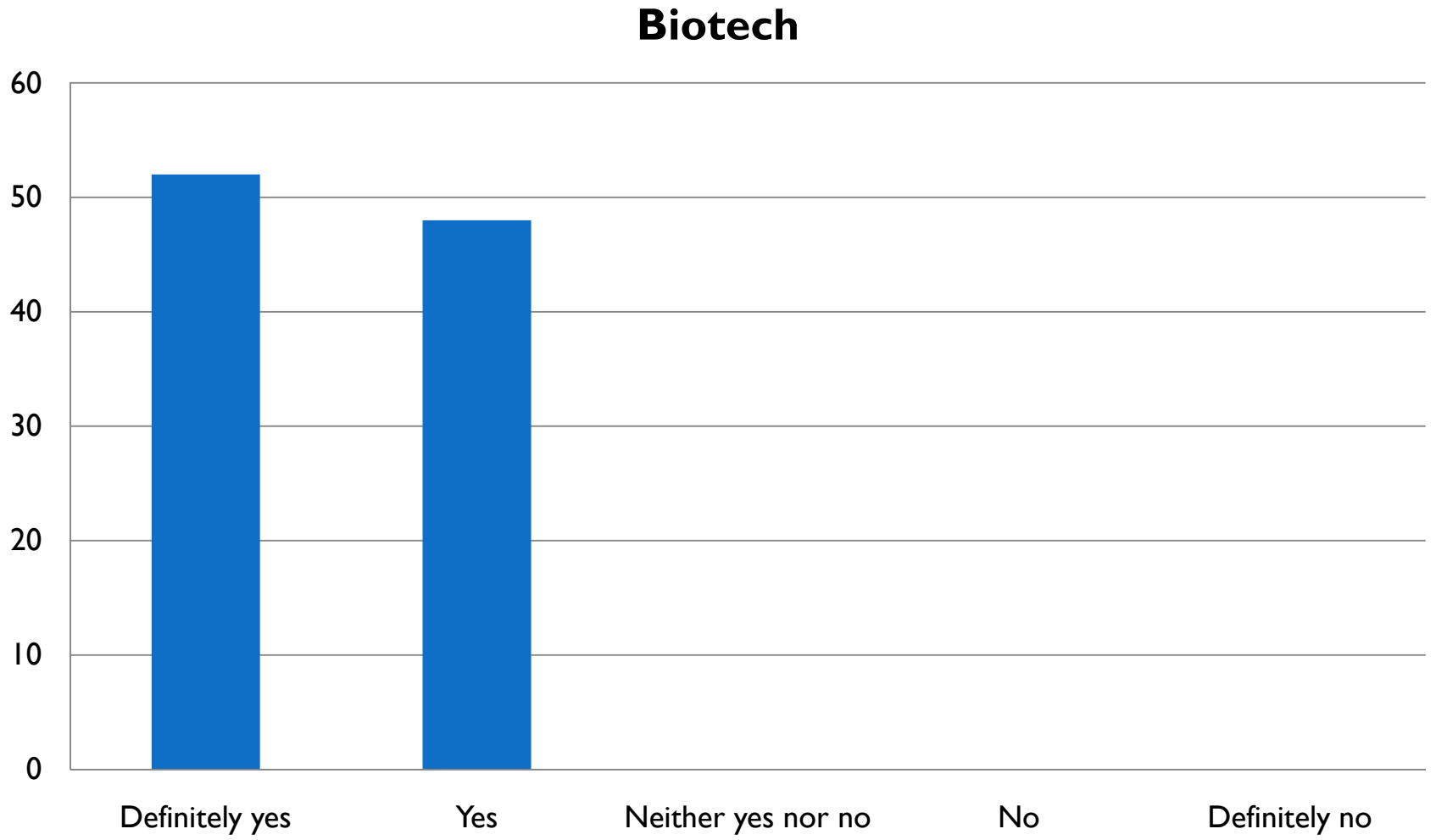

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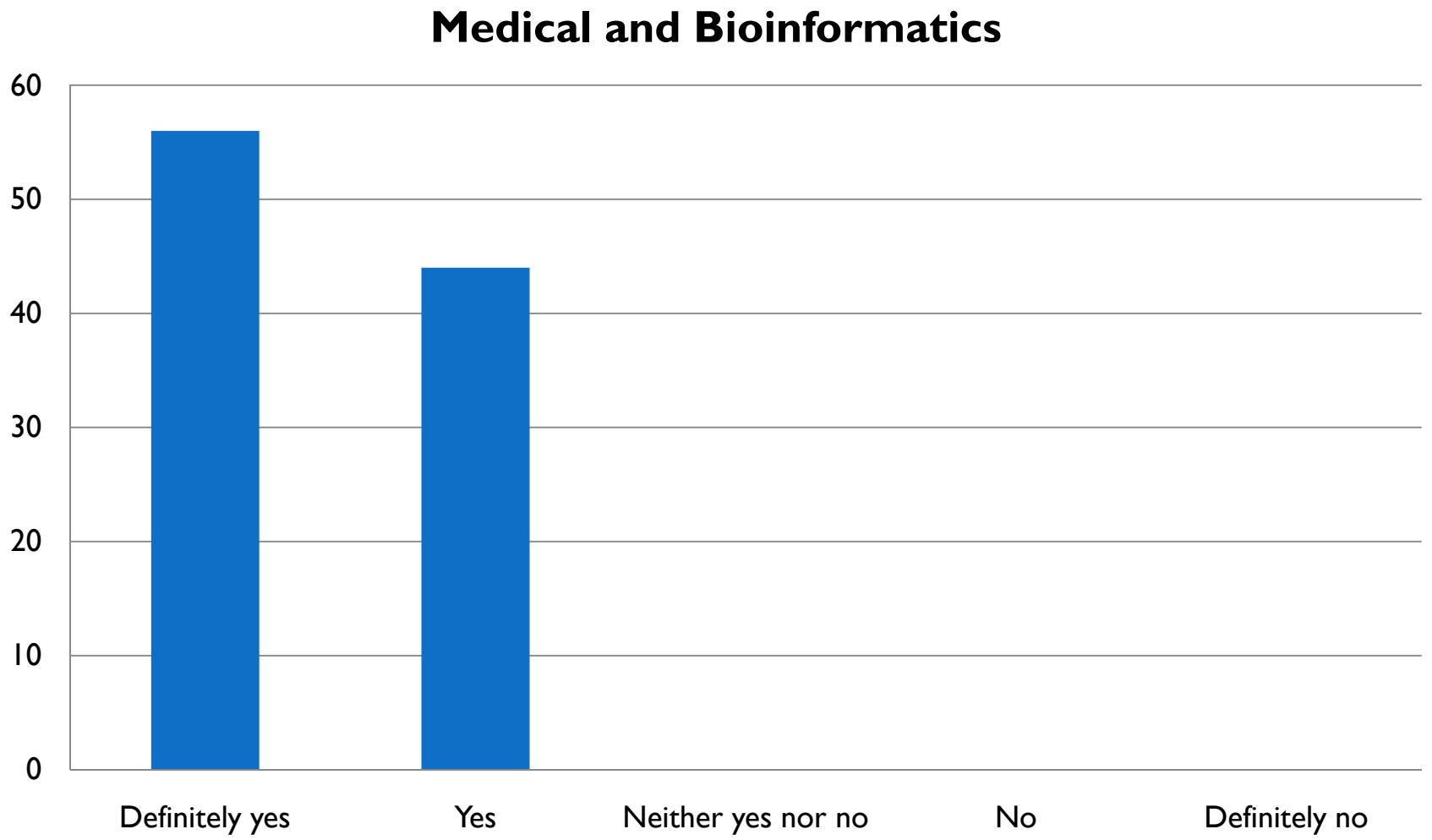

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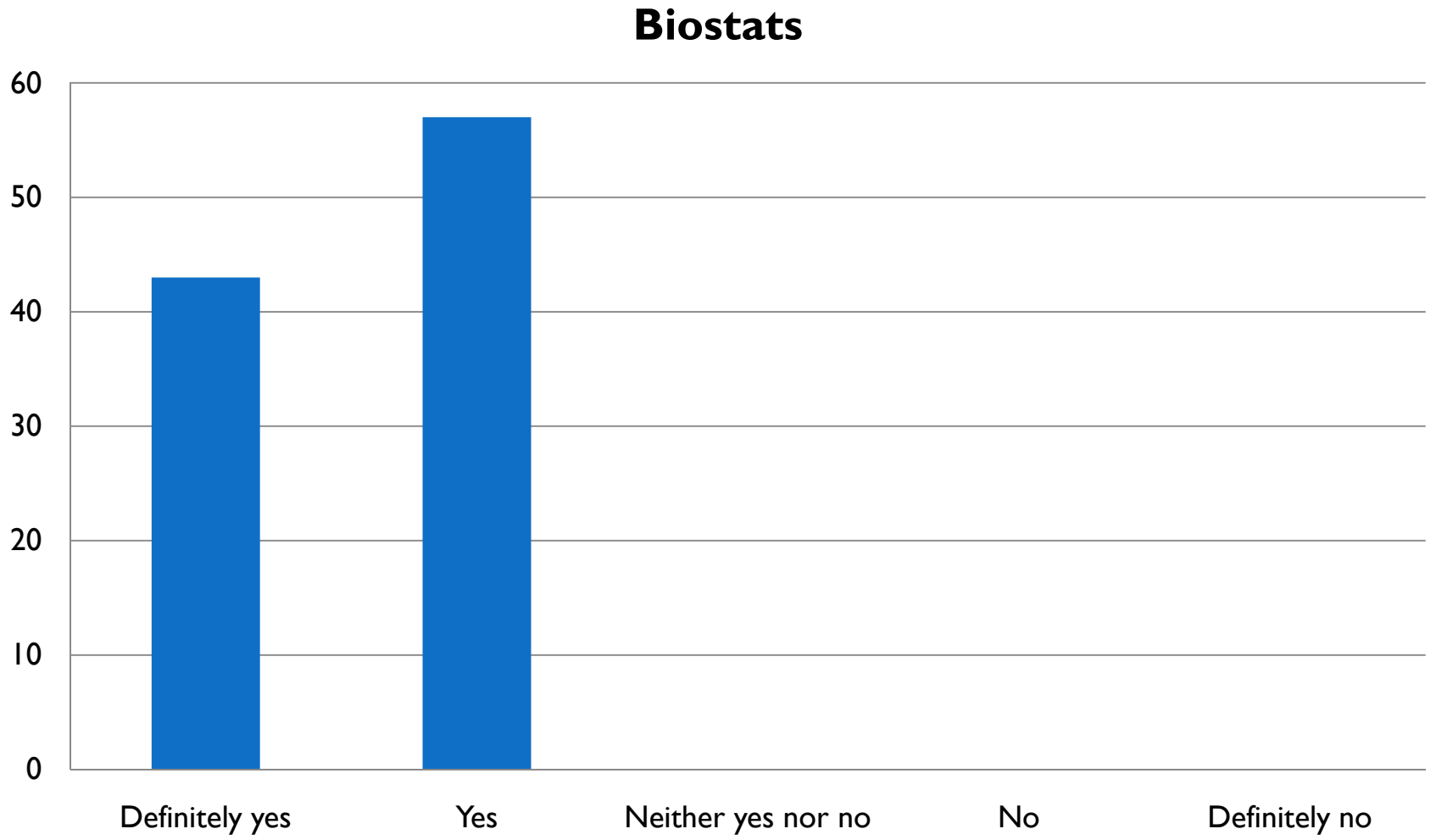

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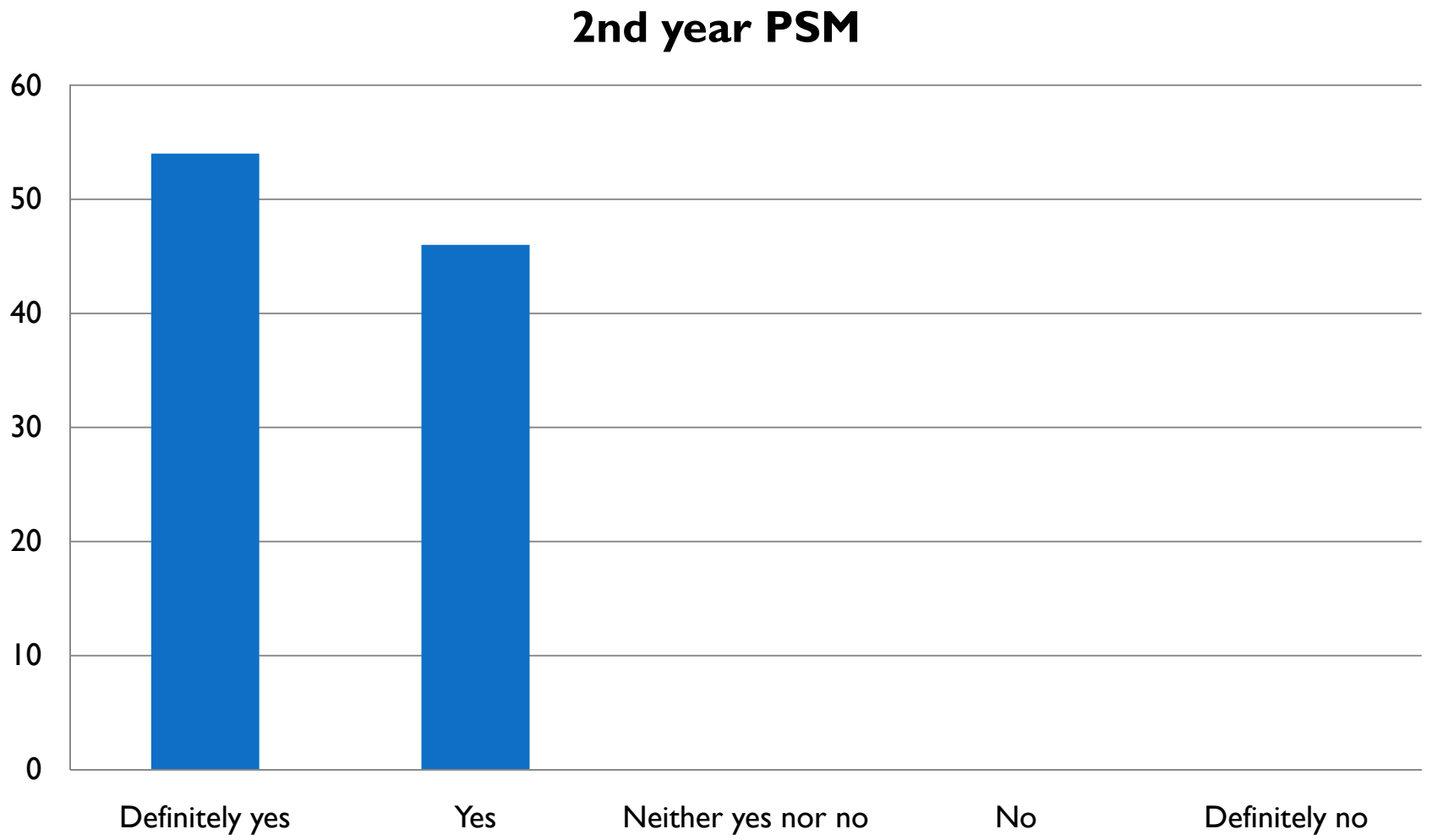

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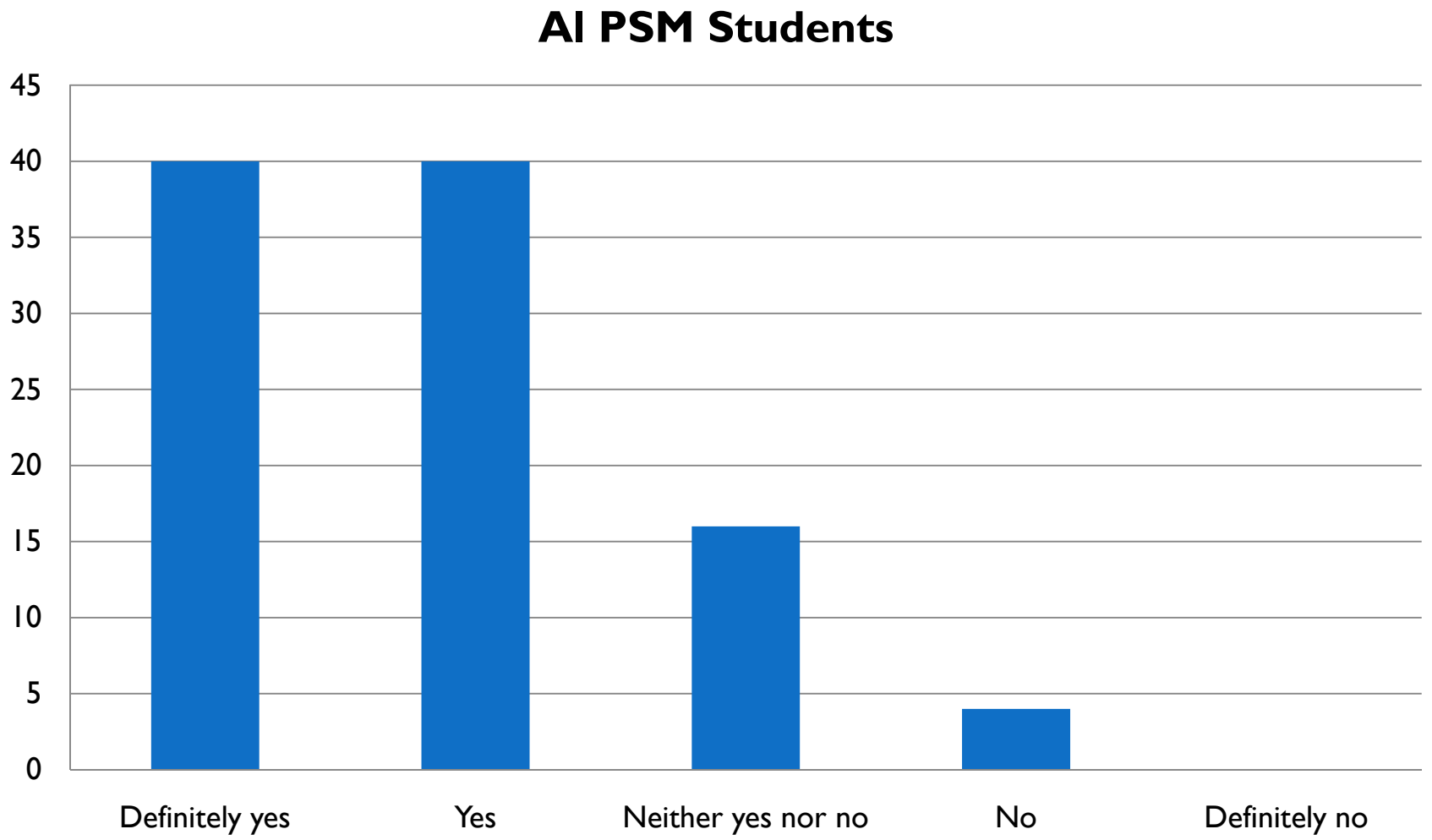

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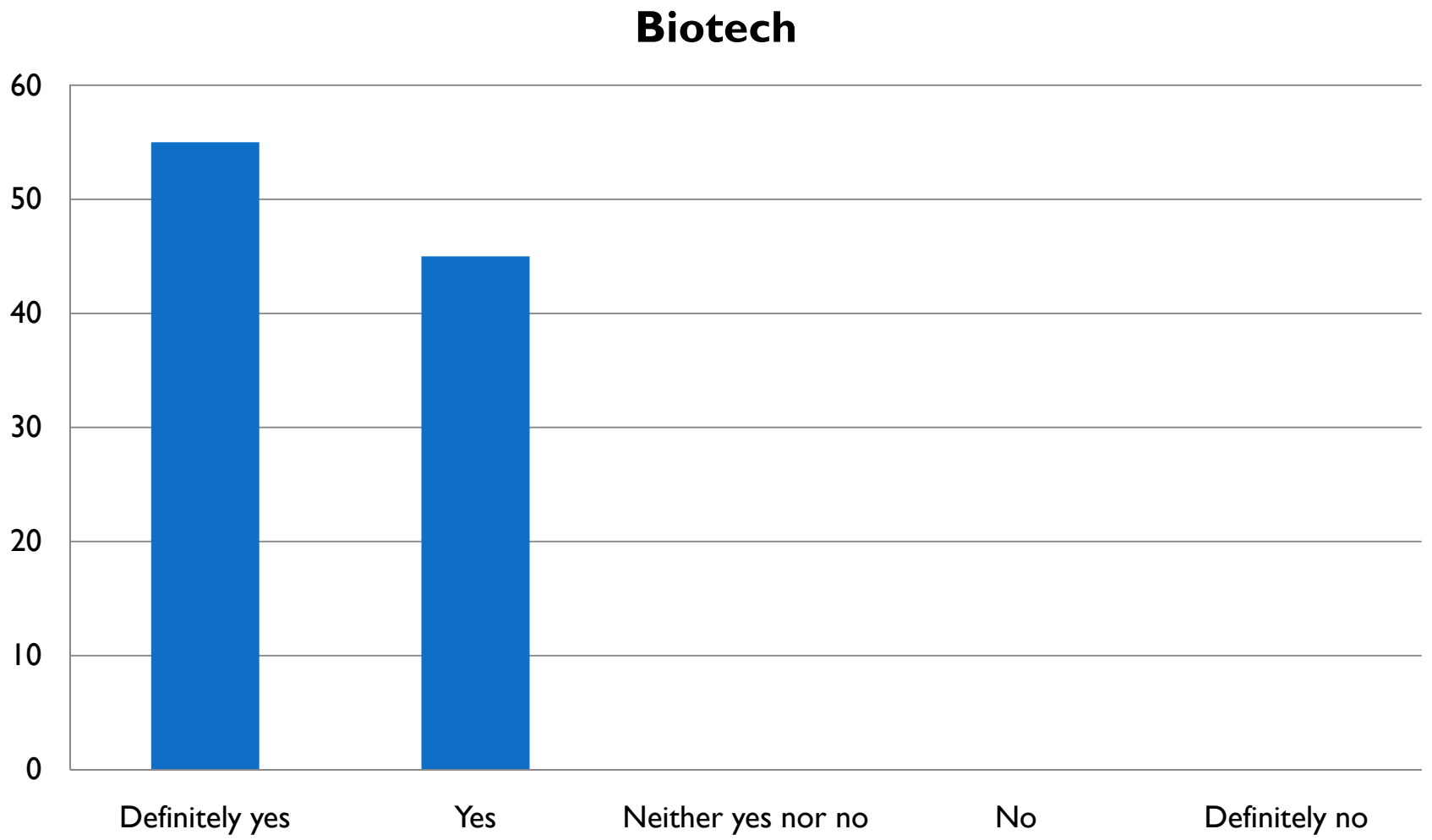

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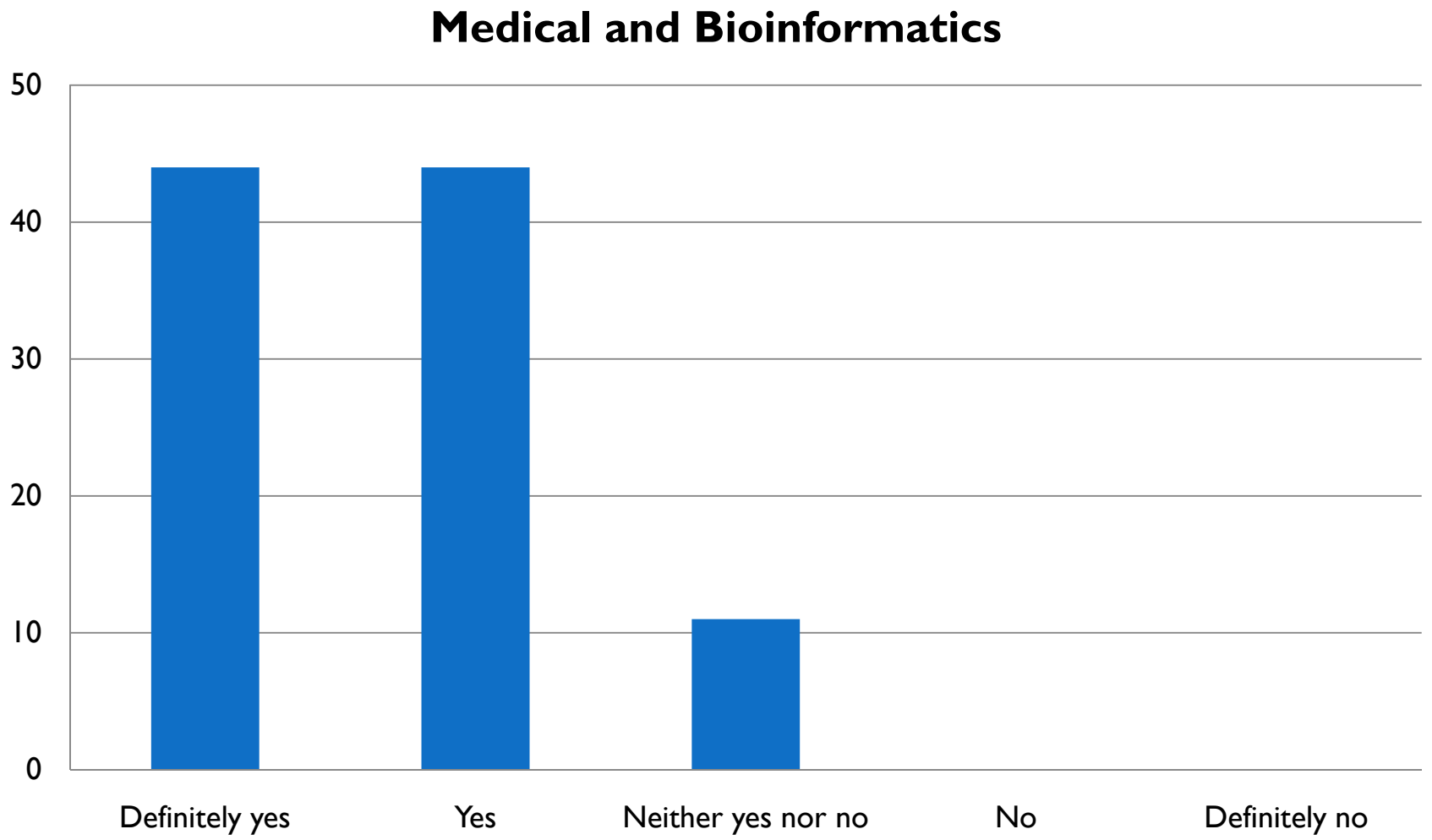

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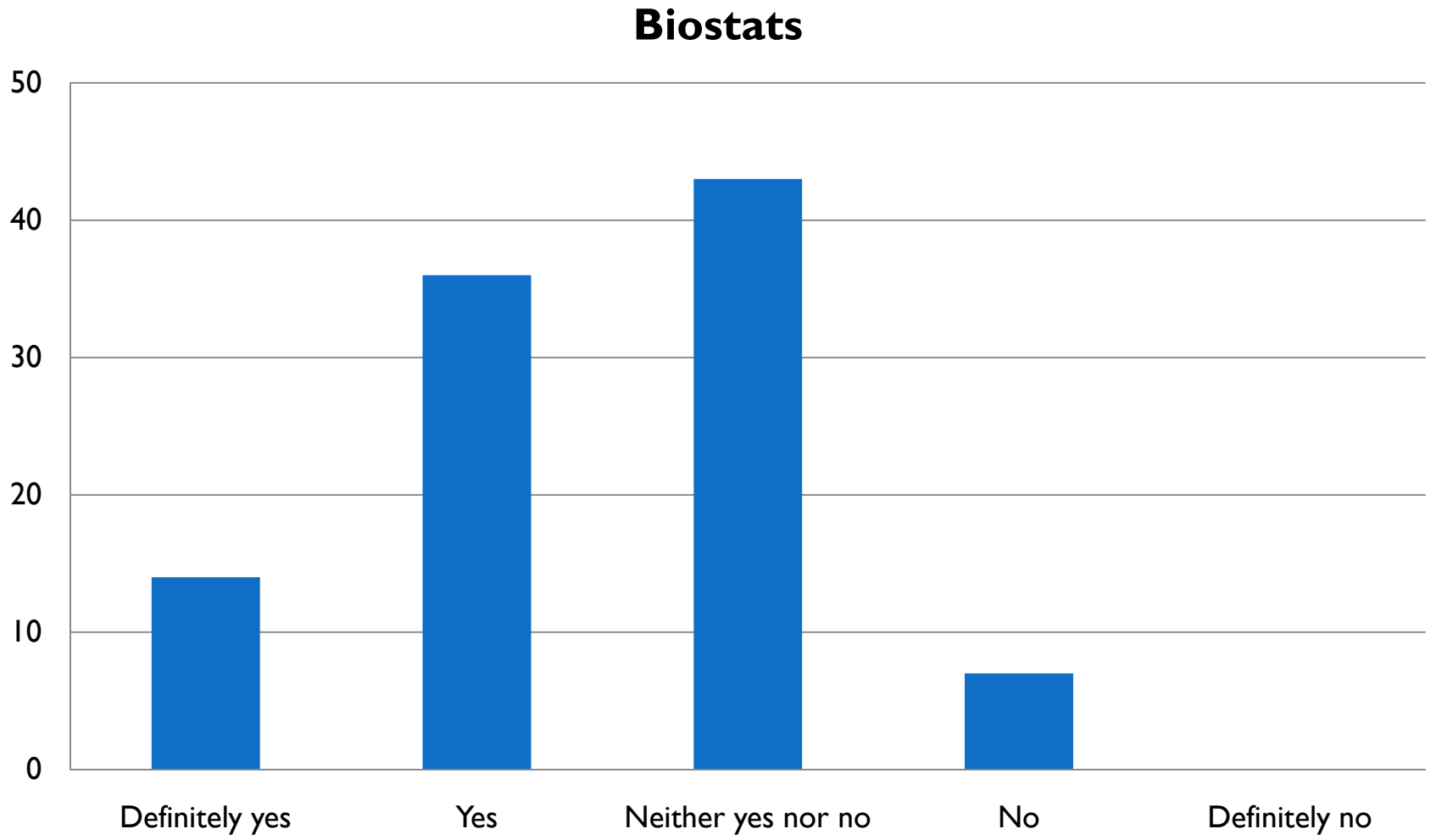

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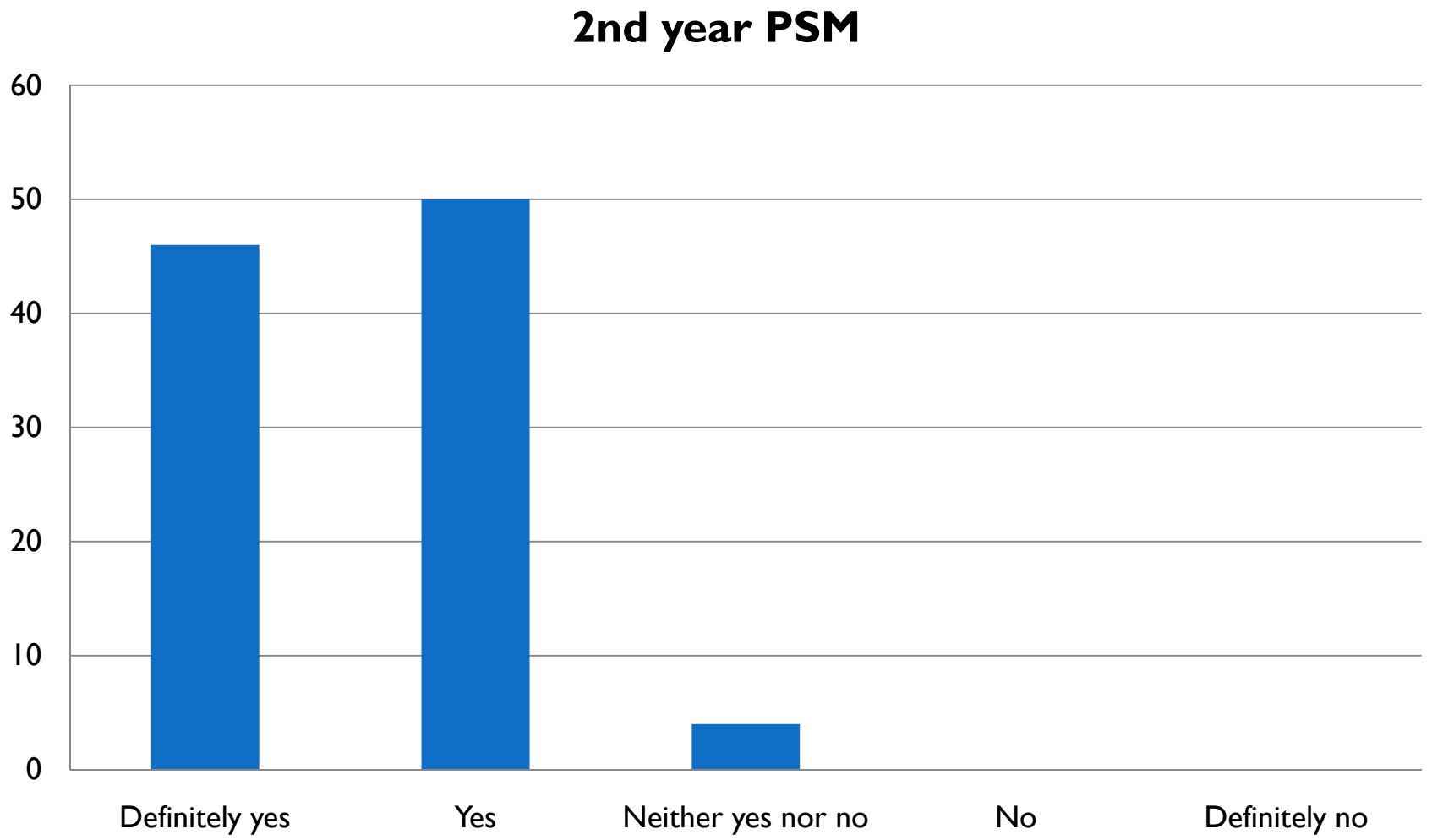
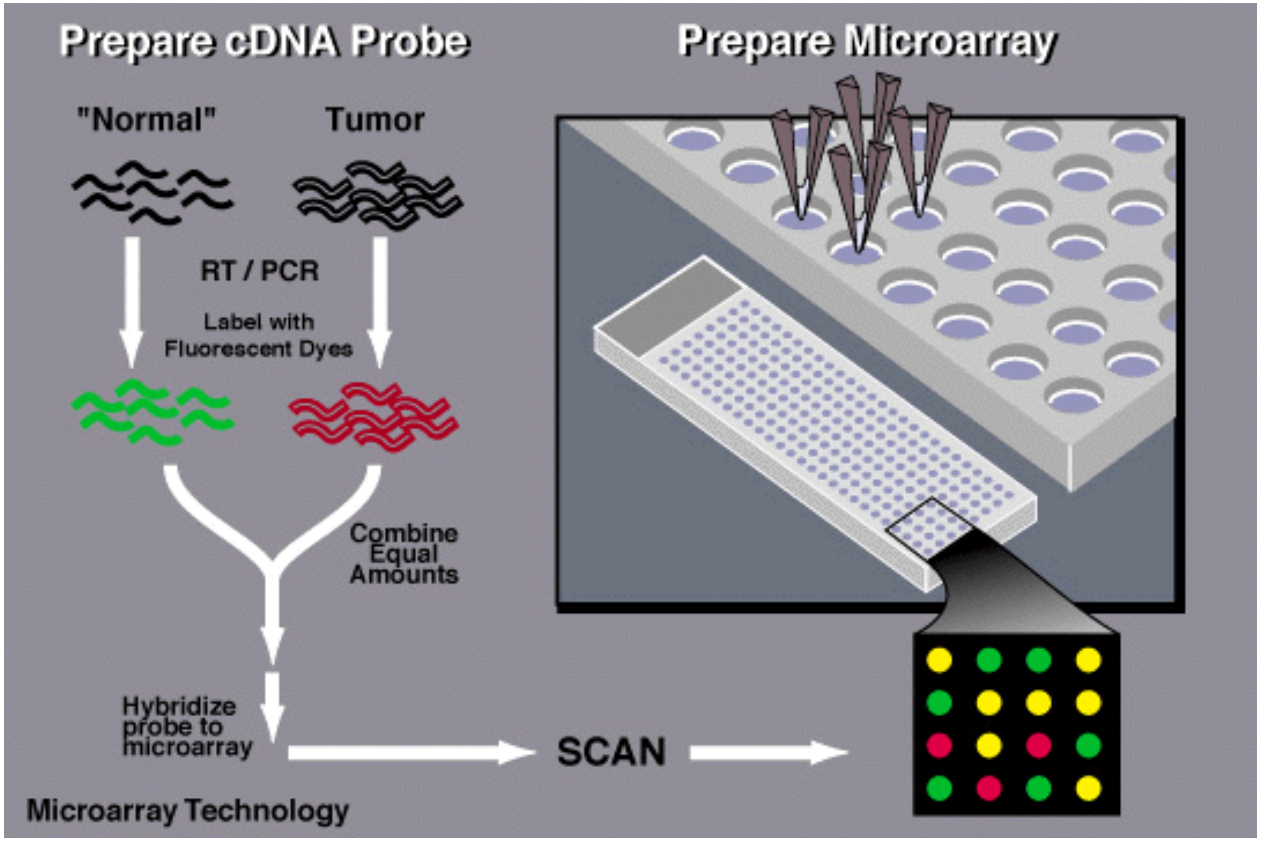


So, what's up with the biostatistics students?

- Many are employed full-time – it is hard to find time to get together with students to work on projects.
- They do not come from a culture of group projects.
- Most are local students….

Some thoughts:

- Interdisciplinary groups work well
  - **If** the task can benefit from a combination of areas of expertise
- Successful groups will need to take into account extracurricular obligations of the students (work, family, etc.)
- Completing internships earlier may be useful, but there is always a tension between getting to the internship quickly and having acquired the skills to complete a successful internship



plantandsoil.unl.edu/croptechnology2005/UserF...

Questions or Comments?